

ICD 08025 • August, 1979 • \$1.50 • UK:70P
FIRST IN SCIENCE FICTION SINCE 1926

AMAZING

stories

founded by HUGO GERNSBACH

Time Tripping with
**THE MAN IN THE
SILVER SUIT**



SUNFIRE

See Back Cover



**SPECIAL
BUCK ROGERS FEATURE**

A space-hero born on the
pages of AMAZING

COUNCIL OF THE DRONES

Michael P. Kube-McDowell's
first published story

THE INEVITABLE CONCLUSION

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

FIRST IN SCIENCE FICTION SINCE 1926

founded by HUGO GERNSBACH

AMAZING STORIES

Table of Contents
August, 1979



Arthur Bernhard, Publisher
Alan Bernhard,
Associate Publisher
Sol Cohen, Publisher Emeritus
Omar Gohagen, Editor
Robert H. Wilcox,
Editorial Consultant
Elinor Mavor, Art Director
Scott Mavor, Staff Illustrator
W.L. Thomsen,
Circulation Manager

About the Cover

The illustrator has developed a surrealistic conception, weaving in ideas from stories appearing in this issue. There is deliberate distortion to create the impression of strange happenings plus tripping in time. The already peculiar landscape dissolves into the abyss of space to further illustrate the "stepping" into another time frame. Artist Elinor Mavor admits the black void also came in handy for some promo copy and the tiny, flying figure of Buck Rogers. (P.S. "Designing around that UPI symbol is another challenge.")

features

50

MECANO SAPIENS

Story by Dan Eiler
Illustrated by Dan Biamonte

A continuing "reader participation" series about the ultimate mechanical man, Numan, who has inherited the knowledge and feelings of an extinct mankind. Numan's adventures involve his search for a new world where he can create a new "mankind."

74

THE FIRST BUCK ROGERS STORY EVER PUBLISHED

by Philip Frances Nowlan

A nostalgic glimpse at a famous space idol's origins, along with the foreword to the 1928 story and some of its Frank R. Paul illustrations.

fiction

12

COUNCIL OF THE DRONES

by W. K. Sonnemann

An unusual experiment threatens mankind in this quiet thriller — sweetened with a taste of honey.

LICENSED TO UNZ.ORG

ELECTRONIC REPRODUCTION PROHIBITED

56 THE INEVITABLE CONCLUSION

by Michael P. Kube-McDowell

Mother Earth finally has the "perfect" society. Would you want to live there? See Mr. Wilcox's analysis immediately following the story in "WORDPLAY."

80 AFTER IXMAL

by Jeff Sutton

Intelligent Machines are currently doing things like entering world class chess competitions. Is Ixmal the final evolution of such machines? (Read Amazing Facts immediately following Ixmal.)

94 THINK YOURSELF TO DEATH

by C. H. Thames

Did you ever think about changing your "body?" Johnny Mayhem does it all the time.

114 THE MAN IN THE SILVER SUIT

by K. L. Jones

How would you react to a man from a different "time?" Maybe you wouldn't believe his story, maybe you'd be scared, or maybe . . .

Back Cover SUNFIRE

by Edmond Hamilton

A wondrous tale by one of SF's all-time masters.

departments

4 COUNTDOWN

editorial notes and news

6 INPUT

Readers say what's on their mind.

10 THE INTERSTELLAR CONNECTION

by Tom Staicar

Reviews of some of SF's recent best reading.

71 WORDPLAY

by Robert H. Wilcox

In "The Spectroscope," Mr. Wilcox analyzes "The Inevitable Conclusion."

93 AMAZING FACTS

This piece on "The Intelligent Machine" relates in an interesting way to our story "After Ixmal."

ISSN 0164-7687

• AMAZING STORIES, Vol. 52, No. 4, August, 1979 is published quarterly by ULTIMATE PUBLISHING CO., INC., Lincoln Ave., Purchase, N.Y., 10577. Editorial Office: P.O. Box 642, Scottsdale, Ariz. 85252. \$1.50 a copy. Subscription rates: One year (4 issues) United States and possessions: \$6.00; Canada and Pan American Union countries and all other countries, \$6.50. Change of address notices, undeliverable copies, orders for subscriptions and other mail items are to be sent to P.O. Box 642, Scottsdale, Ariz. 85252. Second Class Postage paid at Purchase, N.Y. 10577, and at additional mailing office. Copyright 1979 by Ultimate Publishing Co., Inc. All rights reserved. Editorial contributions must be accompanied by return postage and will be handled with reasonable care; however, publisher assumes no responsibility for return or safety of art work, photographs or manuscripts. 185580.

ACKNOWLEDGEMENTS: After Ixmal; Council of the Drones; Think Yourself to Death; copyright 1959, 1960 by Ziff Davis Publishing Co.; Sunfire, copyright 1961 by Ziff Davis Publishing Co.; Foreword to Armageddon — 2419 A.D., copyright 1927, E.P. Co., Inc.



NEW IDEAS are coming in every day. Working on this magazine is very stimulating, and we love it! Our goal is to deliver to you the very best SF entertainment we can. We want to thank you all for going to the newsstands and buying *Amazing Stories*. We deeply appreciate each and every reader. A special thanks to all who have subscribed by mail for the year ahead.

Many people wrote to tell us they were "amazed" at the new excitement in our pages. We hope to keep right on amazing you! Don't expect us to fall into some predictable pattern. Look for pleasant surprises in every issue. Our panel of editorial readers selects the *best* they can find for lively, entertaining reading.

OUR FIRST letter responding to the May, 1979 *Amazing* read: "*Amazing Stories* is to Science Fiction what *Roots* is to Alex Haley. I enjoyed reading the May, 1979 issue, and it is great to be reminded of SF's 'Roots' The fact that you seek new authors is exciting. I'd rather read new authors than the minor works of the so-called big names", Randy Fine, Chicago, Illinois.

Many other readers requested a "letters" column which we have now been able to commence (see *Input*, immediately following this editorial). The May issue was our new staff's first production effort, and we had no letters to print! We did have a gut feeling about what our audience might be clamoring for, and the letters coming in, by

and large, seem to be supporting that hunch.

Most of all, we want to include *all* of our readers in the scheme of things; contributions and suggestions will all be carefully considered and *answered*. If there is a delay in our reply, please bear with us, as we need time to read all submissions. If you do not receive a reply after three months, *something* has gone haywire and you should contact us again. No one will be ignored. The magazine is *yours*. You are the reason it is being produced.

WE ARE pleased to introduce our new editorial consultant, Robert Wilcox, who will be contributing a regular column to *Amazing*. Mr. Wilcox has been a freelance technical and creative writer for many years. His background includes metallurgical engineering and publishing, as well as teaching on the college level. He has currently introduced the first science fiction literature course at Glendale Community College in Arizona, and is developing a text and teacher's manual in conjunction with that project.

Anyone interested in contacting Mr. Wilcox about his new text may do so through the magazine. The purpose of his column is to give our readers a taste of what a science fiction literature course is all about, and our writers an idea of what elements should be considered in an effective piece of creative writing.

WE HAVE been able to devel-

op some regular departments so many of you have been asking for — our editorial, in a conversational style we hope you will enjoy; and letters; *Amazing Facts*; *Wordplay* by Mr. Wilcox; and a book review column, *The Interstellar Connection* by Tom Staicar. See our letters column, *Input*, for a first-person account of our new book reviewer's credentials and intentions for this interesting new feature.

NEW FICTION writers in this issue include K.L. Jones with *The Man in the Silver Suit* and Michael P. Kube-McDowell with *The Inevitable Conclusion*, his first published manuscript. Jones' first story, *OOOPS*, appeared in April, 1979 issue of *Fantastic*.

Also, contributing a story line for our series, "Mecano Sapiens," is Dan H. Eiler, whose ideas are most ably illustrated by artist Dan Biamonte.



Hugo Gernsback

THE most important event in the entire history of science fiction was undoubtedly the appearance of *Amazing Stories* on the newsstands of America — April 5th, 1926 — the world's first science fiction magazine. Its publisher

was Hugo Gernsback. "Mr. Science Fiction," as Hugo Gernsback is often called, was asked to write an editorial for the 35th Anniversary of *Amazing Stories* and in this editorial he said:

"AS WE look back over the vista of modern science fiction, we are struck by the fact that the outstanding stories in the field — the ones that endure — are those that almost invariably have as their wonder ingredient true or prophetic science.

It is these stories that arouse our imagination and make a lasting impression on us which succeeding years do not seem to obliterate . . .

What is the future of science fiction in this country? For one who has been closely allied with it for 50 years, I would venture the opinion that, like the stock market, it has its ups and downs, its peaks and its valleys — yet, it, too, for the long pull, advances steadily over the years.

Because of the present unusual interest in science by our young generation, it would seem certain that there will be far more science fiction authors in the future than there ever were in the past. Hence there should be more and better stories, too.

I was much encouraged last October when, invited to speak on science fiction at the Massachusetts Institute of Technology, I noted the profound interest of the students in the subject. My talk lasted only 30 minutes, but the question and answer took nearly 2 hours!

But what impressed me most was that a university of the calibre of M I T took science fiction so

seriously. If now all other seats of learning will inaugurate science fiction societies, I can see only a vast and steady increase in this, the most exciting facet of literature in modern times.

And now a thought from our s-pun-sor. It may NOT be welcomed in certain quarters: There will come the future amazing day — now don't all laugh at once — when AMAZING STORIES will be composed, or perhaps outlined in detail, not by human authors, but by an *electronic biocomputer-menograph* (menòs-mind). I also predict that this Autocerebration wonder is not likely to suffer from Science Fiction Fatigue nor Exhaustion."

GET over one thousand pages of top name SF and Fantasy stories for only five dollars; EIGHT ISSUES of our back list of titles. DON'T ASK FOR SPECIFIC ISSUES. We can only pick them at random. IF you want the "GRAB BAG" just send \$5.00 plus \$1.00 to cover packing and shipping to AMAZING STORIES, BOX 157, PURCHASE, N. Y. 10577

OUR REQUIREMENTS for submission of manuscripts are as follows: typewritten; double-spaced; one side; with self-addressed, stamped envelope included. We prefer stories from 1000 to 8000 words (approx.), unfolded manuscripts and material free of gross spelling, grammar and punctuation errors (which can ruin your idea and your chances). Those whose work is accepted will be notified and paid (1¢ to 2¢ per word, first North American magazine rights) on or prior to publication. Good luck!

INPUT



GOING FOR the mail each day is publisher's paradise, editor's elixir! Response from our audience, favorable or otherwise, makes it all worthwhile. Please, keep on writing with your impressions, ideas, suggestions, et cetera. And next time, we want to hear from people who have never written to a publication before — tell us what's on your mind!

Our first letter in this column is printed to give you a behind-the-scenes glimpse of how we like to work with people, and how our new book review column, "The Interstellar Connection," came to be a part of Amazing Stories — ed.

Dear Mr. Gohagen,

CONGRATULATIONS ON being chosen as editor of *Amazing Stories*. I read the May issue and hope that you will stay on as editor for a long time. Although I much prefer new stories to reprints, I understand the circumstances which made the new policy necessary. As long as every story is good, your readers will stay faithful until you build a new group of writers who can deliver stories up to your standards.

I read your Help Wanted notice on page 67. I am a free lance writer and I want to propose a new column which is not on your current list. I think the readers of *Amazing Stories* would welcome a really good book column as a regular feature. The letters to the other SF magazines tend to show that such features bring in more mail and interest than the fiction,

in many cases. Since the new *Amazing Stories* will attract readers who like traditional SF rather than New Wave, there is a need for a column which will help them find good, enjoyable books to read. *Amazing Stories* can become the place to watch for news of good, solidly plotted books with characters your readers can relate to. The column would have traditional SF classics which are reprinted currently, as well as several new books. A positive approach would insure that in each issue's column there would be good reading the reader might have missed otherwise. This is what I propose for your magazine. As there were 981 SF books available during 1977 and more in 1978, it is increasingly difficult to find the good books among the hundreds of good-looking but boring ones. I would offer this service for *Amazing's* readers.

I am 32 years old and have been reading and enjoying SF since 1958. I am thoroughly familiar with the history and content of the field. I keep up with the latest books and all the professional magazines. I read *Locus*, *Thrust*, *Algol*, *Science Fiction Review* and several other fanzines regularly.

I attend SF conventions and have spoken with such writers as Poul Anderson, Gordon Dickson, Joe Haldeman and Fred Pohl. I have interviewed writers for articles which I wrote, including Lloyd Biggle and Dean McLaughlin.

I have written articles for a variety of professional publications inside and outside the SF field. Outside SF, I wrote pieces which appeared in 1978 in the *New England Senior Citizen*, *Ann*

Arbor News and the *Detroit Jewish News*. A national UFO magazine, *The Hefley Report*, published my article "Black Hole Transit." A local newspaper published an article on SF publishers. I have had three features in the *Ann Arbor Observer* monthly newspaper.

I am enclosing some writing samples. The SF review column published in the national magazine, *Starforce*, is an example of my reviewing experience. I also had a review in *Lift-Off* (a fanzine). Not yet published, but accepted for publication shortly are three book reviews for Richard E. Geis' *Science Fiction Review*. Also accepted is an article on SF author Robert Asprin, which will soon appear in the national *Writer's Digest*. I had a letter printed in the November, 1977 issue of *Analog* and one in *Empire SF*. My short story, "The Collector," appears in the current issue of Donn Brazier's fanzine, *Farrago*. A forthcoming issue of *Empire SF* is scheduled to publish an article on books about writing SF.

I want to be part of the new direction you are taking in *Amazing Stories*. Let me know what you think of my proposal. Thank you for your time and consideration.

Tom Staicar
Ann Arbor, Michigan

Dear Mr. Gohagen,

... I WAS browsing at a local newstand several days ago when I came across the May 1979 issue of *AMAZING*. I've never subscribed to the magazine, but have, from time to time, purchased it on the stands. Unfortunately, I was ne-

more input

ver very thrilled with the stories published therein. (But then I've never been excited over *ANA-LOG*'s stories, either.)

The "new 'old' look" of the May *AMAZING* did, however, spark my interest, and when I saw that changes had been made I had to buy it. I immediately read the message from publisher Arthur Bernhard, then checked out the old Gernsback editorial. Flipping the pages, I spied your "help wanted" notice. Perhaps by coincidence, I had just finished a fairly extensive rewriting of the enclosed story: what else could I do but mail it to *AMAZING*?

It's obvious that you're following the same format which has been successful with the digest-sized Isaac Asimov SF magazine, and which I read fairly regularly. (I've also purchased the first two Asimov Adventure SF zines.) I wish you luck with the new-old *AMAZING*; it deserves more credit and a better circulation than it has in the past received...

Good luck with *AMAZING*. I approve of a more adventure oriented format, but like people stories as well. The republication of Binder's "I, ROBOT" was appreciated....

Curt Sutherly
Fredericksburg, Pa.

We appreciate your comments and interest very much. We were not able to place your story, but would like to see any others you may have to submit. All stories are given careful consideration by a panel of readers.—ed.

Dear Mr. Bernhard,

I HAVE just seen the May issue of *AMAZING* and can say in all sincerity that I am extremely pleased with the graphics. I don't particularly care for the pink on the cover but the illustrations in the entire magazine are excellent. I hope to see Steve Fabian in *Amazing* again in the future and I hope you will have an editorial column in every issue and that you will reinstate the letters column....

James J.J. Wilson
Des Moines, Iowa

We are happy to report that Fabian's work will be appearing in upcoming issues.—ed.

Dear Editors:

I HAVE read *Amazing Stories* for several years, but have avoided *Fantastic Science Fiction* until the April 1979 issue. I receive the changes to the format of both magazines with mixed feeling.

I am glad to be able to purchase a magazine of scientifiiction which contains a good variety of stories. If I wish to read strict fantasy or strict hard science fiction, I am better off selecting a book. If the new format is maintained, I will have two magazines I can count on for a good sampling of stories.

I did, however, miss a letters section and the editorial. I feel these items to be an important part of the entertainment of any SF magazine.

I am also delighted by your call for new talent. I hope the response will be great. The concept of reader participation introduced

in "Mecano Sapiens" in the May *Amazing*, is also a worthwhile venture, and I hope will be successful in generating more interest in your product.

The story attached is my attempt at participation. It is only my second submission to any magazine, my other story is still under consideration elsewhere. When I first conceived of "A Sensible Letter", I thought of extending the story to over ten pages but I realized this short format is sufficient to tell the story. Hope you enjoy it.

Gary Klein
W. Lafayette, Indiana

Thank you for writing! We did not place your story but urge you to try us again.—ed.

Dear Editor:

I THOROUGHLY enjoyed the May 1979 issue of the new "old" *Amazing Stories*, and the timeless, Hugo Gernback editorial, "Our Unstable World", celebrating your occasion of "being golden again", but still was surprised at your new format.

The kind of stories I would like to see in future issues of *Amazing* are, of course, less the fantastic-science-fiction type like "Beyond The Universe" in the May issue, but more the old "world-wrecker" type of stories Edmond Hamilton used to be noted for.

I particularly liked "Devolution", by Edmond Hamilton, in this issue, and was happy you managed to come up with a fitting old work of his to help liven my day of reading pleasure, since he died February 1977. I also like the

idea behind your special new feature, "Mecano Sapiens", starring the character, "Numan", and hope your readers' response to this will be great in the near future.

James W. Ayers
Attalla, Alabama

Dear Sir,

One night, while taking a walk downtown, I suddenly got the urge to browse around a magazine store which was hitherto unknown to me. Instinctively, I headed straight for the science fiction section. And there in front of me was lying the May, 1979 issue of *Amazing Stories*. This came as a complete shock to me, because I had never seen an issue of *Amazing Stories* on sale in Montreal. My usual magazine dealer never gets it. (I shall talk to him about it!) Needless to say, I quickly shelled out the necessary buck and a half in a fit of paranoia, thinking that the last copy would be snatched from under my nose while my hands were momentarily tied up looking for my wallet. Once having paid, I rushed home, eager to start reading. I could not wait, so I started reading it on the one hour trip home by public transit. I read it all in one night, and your Help Wanted ad caught my eye. Being an avid science fiction reader since I read "Trapped in Space" by Jack Williamson in elementary school, and being a closet science fiction writer, I decided to write to you for more information. Could you please send me more information on parts B & C of your ad. Thank you very much, and I will anxiously be awaiting your reply.

Rudy Taraschi
Montreal, Quebec, Canada

The Interstellar Connection

Book Reviews

by Tom Staicar

The Fountains of Paradise, By Arthur C. Clarke (Harcourt Brace Jovanovich, \$10.00) Arthur C. Clarke insists that he absolutely, positively has given up writing. He claims he has said all he has to say and that *the Fountains of Paradise* will be his last book. He intends to spend his days relaxing and skin diving near his home on the island paradise, Sri Lanka (formerly called Ceylon).

Set on a fictionalized version of Sri Lanka in the future, this novel is definitely not the work of a man past his prime. Clarke is at the peak of his writing powers, and this book will delight his millions of loyal readers. It has some elements reminiscent of *Childhood's End* and *Rendezvous With Rama*, plus some of the best SF has to offer: an exciting story, believable people, a solid scientific foundation and the fascination of new ideas which will stretch the reader's imagination toward the unknown.

In the novel, rockets for cargo and travel are used so commonly that there is a rapid increase in sonic boom noise pollution and upper atmosphere damage to the ozone layer. A fifty-percent-increase in rocket traffic is projected and this causes Vannevar Morgan, creator of the enormous bridge across Gibraltar, to envision an even more grandiose scheme; a bridge could be built, using new hyperfilament tapes created under zero gravity conditions in space laboratories, which could physically link a tower on Earth with a satellite in orbit around the planet! Like a kite on a long string,

THE FOUNTAINS OF PARADISE

ARTHUR C.
CLARKE

which Morgan recalled from his childhood, this system could allow control over a space elevator which could carry vertical shuttle cars to and from the satellite. The satellite would have to be in a geosynchronous orbit (matching the Earth's rotation speed and staying over the same point at all times).

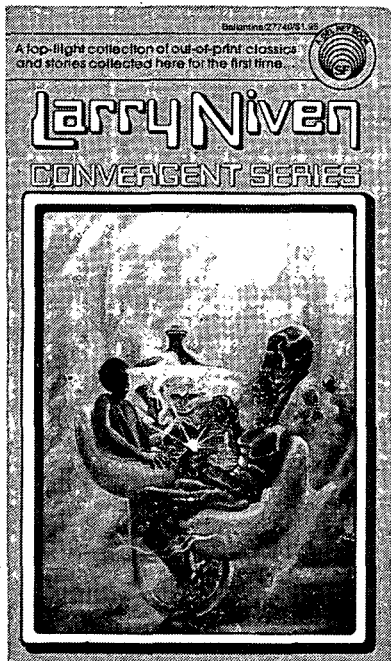
Through skillful use of imagery, Clarke lets us imagine how it would feel to look up (or down) the thousands of miles of connecting tapes as we move up toward the satellite. If anyone got outside the shuttle cars, they would not float weightless above the Earth, but would plummet rapidly downward, burning up like a meteorite.

There are other dangers along the way, and Clarke masterfully builds suspense, alternating flashbacks with tense plot movement. The theme of contact with space aliens drifts in and out of the novel in a tantalizing man-

ner, similar to its use in *2001: A Space Odyssey*.

There are flashes of humor, such as mention of a Walter Cronkite Professor of Electronic Journalism and a dimly recalled 20th Century film with a title something like "Space Wars 2000." Contact with aliens prompts a question about whether our history tapes of a Beatles concert and the World Soccer Finals of 2047 should be interpreted as having religious or sporting significance in our history.

Speculation, history and action are blended together to make a very satisfying whole. Philosophical questions underlie the plot in this multi-layered SF novel. After years of reading SF, I felt a sense of wonder again as I read this book. Clarke is a master, and this novel will rank among his best.



Convergent Series, by Larry Niven (Del Rey, \$1.95) The Stories in this new collection have never appeared

together before. The first seven were part of the 1969 collection *The Shape of Space*. The other fourteen are uncollected stories which appeared in various SF magazines in recent years. There are a few vignettes, short gimmick stories and several fully developed stories. Niven knows his science and can create alien life forms with skill and imagination.

Perhaps the best are his Draco Tavern stories. If you liked the bar scene in *Star Wars*, you will like these. Tavern owner Rick Shumann complains: "I have to keep facilities for a score of aliens. Liquors for humans, sparkers for chirps, flavored absolute alcohol for thtopar; spongecake soaked in cyanide solution, and I keep a damn close watch on that; lumps of what I've been calling green kryptonite, and there's never been a roseyfin in here to call for it."

If you've read Niven books before, I need only tell you that this new collection is on sale. If you haven't, you'll thank me for advising you to read some at your earliest convenience.

World Without End, By Joe Haldeman (Bantam, \$1.95) Joe Haldeman started his SF career with a story in *Fantastic*. Within a short time he had written the Hugo and Nebula winning *The Forever War* and the bestselling *Mindbridge*, two of my favorite books. I talked with him a while back about his plans. He mentioned a novel in progress and added "... and I have to write a couple of *Star Trek* novels." His lack of enthusiasm was not well hidden. Fans put him down for "going commercial." Actually, "commercial" is not as dirty a word to a professional as it is to an amateur.

The *Star Trek* novels look easy to write. The hard part is already done. Just plug in the module containing the world-famous, beloved crew of the Enterprise and write a good plot. Still, the novels have their ups and downs.

World Without End isn't Haldeman's best work, but I can't say I



council of the PRONES

by W. K. Sonnemann

When you hear about "Killer Bees" coming up from Mexico, you wonder what turns a bee into a "Killer bee." This story offers a spine-tingling possibility that could explain the whole thing. Suppose some of the bees in this story escaped . . .



EJN/DC

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE FULL magnitude of the genius of Newton Ware had never dawned on me. I was aware of the fact that he was a most brilliant engineer-physicist, but I had always had a tendency to consider him more theoretical than practical. During his discourse on and demonstration of his new invention, which he had named "Cross-Rays, with Lifex Modulation," I concluded that he was not only a genius but also intensely practical. "I can understand the 'Cross-Rays' term," I said, "because I see that you focus two rays of light upon a spot where they cross, but wherein do you derive the term 'Lifex'?"

Newton looked at me in the manner of an old friend about to divulge a confidence.

"Do you know what life is?" he asked, very seriously.

"No, not exactly." My answer was ready enough, even though I was somewhat surprised, for we had talked on the subject before.

"Neither do I, but I believe I am on the track of it. I mean in terms of something you can define with scientific accuracy, like vibrations of a given frequency in a given medium. So far, I have learned more about the frequency of vibration and its relation to electrical frequencies than I have about the medium. Because I can not yet define life definitely, I have chosen the term 'lifex' rather than 'life'."

Newton was like that. Even in the face of his great invention, his unselfishness and modesty made him careful lest he should overrate its value even by suggestion in the name. At once his other sturdy characteristics flashed through my mind and gave me a deeper insight into the probable import of his invention.

"Life rays, eh?" I mused, aloud. "Not death rays, and so not an instrument of war. But how does it work? Does it affect life in some tangible way?"

"I called you over to witness an experiment of the largest magnitude I have yet attempted, if you would care to see it," he replied.

"If I would care to? Proceed at once. I am all eyes."

NEWTON PRODUCED from a cabinet a live mouse in a cage.

"I have studied this mouse through that." He indicated a detached part of his equipment consisting of a maze of lights, light filters, screens transparent and opaque, graphs, and something that resembled a pair of binoculars made over.

"I have also studied the family cat, Puss," he continued, "who now sleeps so unsuspectingly on yonder chair. Watch both of them closely."

Newton placed the mouse on a pedestal where the modulated rays of light were made to cross when the apparatus was in operation. He then sat down before his equipment and closed a number of switches starting current to two very large lamps, an X-ray machine, an ultra-violet lamp, and a battery of radio tubes and coils. Following this, he manipulated a number of dials on a panel. Occasionally he paused for a consultation of his notes, which were mostly in the form of logographs. In a moment or two his adjustments were satisfactory, I presumed, for he grasped an electrode in his left hand and pressed a key momentarily with his right, a look of expectation on his face. The mouse immediately began to behave queerly, whereupon Newton released it from the cage.

It was a matter of several seconds before the answer to the peculiar behavior of the mouse and the cat dawned upon my mind. The life of the cat and the life of the mouse had exchanged bodies! As extraordinary as this revelation was, there was no other explanation to a cat trying to squeeze through a small hole in the wall while a mouse cuffed at it, jumped on it, and bit it. I wanted to laugh, but sheer amazement prevented me, and Newton later told me that I merely sat with my jaw dropped and my eyes popping. Finally, when the mouse began to lacerate one of Puss' ears, Newton called a halt. He captured the mouse as easily as he would a pet cat and returned it to the cage.

"Would you call the experiment a success?" he asked, gleefully.

I was still too amazed to reply.

"Never mind," he continued. "Let's reverse the process first, changing the cat back to a cat, and then we shall discuss the matter."

For all I could tell, he went through exactly the same proceedings as before, but with different adjustments. It was over in a few seconds. The mouse quivered in the cage, frightened, while Puss ceased trying to escape from the room. When the mouse was again released, Puss made short work of it.

"Now," he continued, "tell me how you liked that."

"How did I like it?" I queried. "It was most interesting. I enjoyed the experience thoroughly, I think. But I am still non-plussed. And if this is really the machine that you have been so secretive about the last six months, how in the world did you get this far along in so short a time?"

"Oh, things just seemed to work out right. The cat-mouse episode was merely the final experiment to confirm my equations in their final form. I am now ready for larger subjects."

"Such as man?" I asked, almost fearfully.

"No less a subject than a man himself, Fred," he replied, quite seriously. "I am hopeful that you might give me an idea as to just what a man might care to exchange bodies with for a short while in order to — well, say to increase his knowledge. I need some valuable idea so that the first subject could be persuaded."

I THOUGHT this over for a while before replying. A great many thoughts raced through my mind, and I was highly suspicious that Newton Ware had already conceived the idea that was forming in my own mind.

My mind turned quickly to thoughts of life itself. Sometimes, when things go awry and there is nothing but discouragement on every side, the pattern seems haphazard and purposeless. Then some peculiar coincidence, accident, or happening turns up, that seems to have such definite bearing on the case as to unify the whole of what has gone before, and one wonders whether it be coincidence or a part of an unknown plan. This was one such incident, if I interpreted it correctly.

It had been ten years since Newton and I were college classmates in engineering. Our lives had separated at graduation as we reported to different employers; and now they had been thrown together again in the small Texas town, from which we both hailed, through the operation of economic disturbances. Newton had lost his position when his employer became insolvent, and, after a fruitless search for other work, he had returned, single, to his father's home to play around with his own ideas on his own time until times got better.

As for myself, I had brought my family to my father's farm as a temporary measure to make my savings last longer while I determined what was to be the next move. I had not been long in finding it. During my absence, my father had acquired a few colonies of bees to manage as a sideline and a hobby, and I was more or less amazed myself at how quickly I, an electrical engineer by training, had become so deeply interested in those marvelous insects. In my consuming desire to find another way to make a living, I found it easy to learn that the country was full of flowers, understocked with bees, and to come to the conclusion that scientific methods and mass production could be applied to beekeeping in such a way as to make it a profitable vocation. I had determined to embark on the venture wholeheartedly the following spring.

And now this had occurred. If a man could really *know* his bees

— know everything that goes on inside of the hive and its relationship to instinct and outside conditions — how much better could he manage them? Newton was now offering me such a means of really studying my bees as no other man before had ever been able to apply. Was this a mere coincidence, or — ?

"I have a very definite idea," I said, somewhat warily.

Ware was all attention.

"Bees. The ordinary honey bee."

"Just what would you expect to learn?" he asked. The peculiar light in his eyes betrayed a subdued satisfaction, and I knew that I had guessed the truth.

"SEVERAL THINGS," I replied. "For instance, no one knows exactly why bees swarm except that it is an instinct designed for the preservation of the species through the establishment of new colonies to replace those that die from one cause or another, or are destroyed. We know that we can keep swarming down to a minimum by giving bees plenty of hive room when they need it, by leaving them plenty of honey and pollen for their own use as food, and by keeping the colony supplied with a young queen so that the bees are contented with their home. Bees will sometimes cast a swarm in spite of these precautions, however, and swarms are a plague to the commercial honey producer who already has as many colonies as he needs. From his standpoint, Dame Nature's method of making two colonies out of one by swarming is merely a division of the working forces resulting in a decreased honey crop. If we could know more about the conditions or influences that cause the swarming instinct to become dominant, we might be able to devise additional means to entirely prevent it. There are several other things concerning colony life that could be learned to advantage, too."

"Would you care to attempt the experiment as a subject?" he asked, barely able to control his excitement.

"Not today, thank you. I shall have to think about it some. I have a wife and kids at home, you know. It would not be so good if anything went wrong."

"Yes, I know." Newton's manner evidenced both relief and patience.

"Now, if you are interested, let's go into some of the scientific details of this thing."

I spent four solid hours with him and learned very little. It would have been foolish, of course, to expect to learn in four hours all that Newton Ware's brilliant and imaginative mind had

developed in six months of diligent effort. I could see that he had several equations representing as many different forms of life, all of them derived by complicated mathematics from one master equation. The variables were the same in each equation, although sometimes with different exponents, but the constants were different for different forms of life. Nature's constant, the natural logarithm, $e = 2.71828$, appeared at least once in each. A constant appeared in the human equation which did not occur in any of the other equations. He called it the immortality constant. In deriving and setting up the various sub-equations, Newton had had to develop the elements of a new branch of mathematics that was very difficult for me to follow, and, ten years ago, I had made A's and B's in calculus. I became convinced that his particular inspiration for the conception and interpretation of all the equations and the principles involved was peculiar to himself alone, and I rather doubted if anyone else would fully understand his work for many years to come. I gave up at last and took my leave, fatigued, and with a touch of headache.

I SPENT a troubled night, alternating between periods of doubt and periods of confidence. I did not consult my wife, of course. To have done so would have been to put an end to all further deliberation. Her vote would have been a most emphatic NO!, and I could not have blamed her. I am open to criticism for not having treated her squarely in the matter, but let that drop. My eyes were turned toward the glorious prize involved. Newton had offered me the opportunity of becoming the greatest living authority on the subject of beekeeping, through intimate first hand experience, and my ambitions were far from being dead. It was not that I particularly cared for fame that would come to me, but that I did particularly care with all my soul for the means of making a substantial living for my family in a vocation that interested me tremendously. To emerge from the experiment successfully would, without the shadow of a doubt, contribute greatly to my success in my new vocation, for I should know what to do for my bees in their management, how to do it, when to do it, and why it should be done. I would be equipped to become the nation's leading honey producer, and, quite possibly, the nation's most successful breeder of high quality queen bees. But how about the risk involved? I was confident that Newton was a genius, and that, in all probability, the experiment would go through without a hitch. But suppose it did not? Suppose I should die in the experiment, leaving my wife a widow and my children fatherless? I wondered what the percentage was, and what per-

centage risk of dying I should take without consulting my wife. Perhaps I should have erased the whole thing from my mind, but I could not. Ambition urged me on.

It was not until I visited the post office the following day to obtain the mail that I made up my mind definitely. An item I had been expecting was in the box, and again the coincidence-factor occupied the foreground of my thoughts. I could not get away from the subtle suggestions that, once again, the means of making the experiment had been thrust into my life. The item in the mail was a queen bee in a mailing cage. I made up my mind definitely, once and for all, win or lose. A few minutes later I was ushered into Newton's laboratory.

I handed him the queen bee mailing cage that had arrived in the morning mail. It consisted of a small block of wood about $1\frac{1}{4}$ in. \times $3\frac{1}{2}$ in. \times $\frac{5}{8}$ in. On one flat side three holes of about 1 inch diameter had been drilled nearly through, these holes overlapping so that there was passage between them, and the cavity thus formed in the block was covered by a piece of wire screen secured by tacks. In this cavity there were one dozen worker bees and one queen bee. The space they occupied, however, was restricted to two of the one inch holes; the other, on one end, being filled with a special candy prepared by kneading together a mixture of honey and powdered sugar. This candy-filled hole connected with the outside world through a smaller exit hole drilled into it through the end of the block and which was also filled with candy. A similar hole in the other end of the block connecting with the open space that the bees occupied was closed with a piece of metal. It was through this latter hole that the bees had been forced to enter the cage.

"Inspect the future abode of my soul," I said, lightly.

"Do tell! Just which one of these devilish bugs do you wish to be?"

I pointed out the queen.

"Tell me about her," he said.

"I INTENDED to. I bought this young queen from a well known queen bee breeder, because I wanted to give his strain of Italian bees a trial. Dad and I have a colony in which the queen is old and failing and we wish to replace her. (Left to themselves, the bees would ultimately raise a new queen themselves, but there is no reason why we should wait on their fancies.) We shall open the hive, seek out the old queen, and destroy her. We shall then place this queen in the hive, cage and all, and close it up. The hive bees will eat away at the candy from the outside and the caged bees will continue to use it for food. In three to four days the

candy will be eaten away to a point where the new queen can emerge from the cage. By this time she will have acquired the colony odor, and will be accepted as the new queen of the colony."

"Accepted?" he queried.

"Yes. If I released this queen in a normal colony of bees she would meet her death. Bees, as a rule, will not tolerate but one queen at a time.* They would recognize the stranger as such by her different odor and would put her to death by a means known as 'balling,' in which a tight cluster of bees about the size of your fist surrounds her and literally hugs her to death. Even if she escaped this fate, as soon as the new queen met the old one there would be a fight to the death between them. But, in using the method I outlined, the bees become acquainted with the fact that they are queenless in a few minutes after the old one is killed and are ready to 'be reasonable' when the new one walks out of her cage. The proposition of her acquiring the colony odor is in accordance with the best beekeeping texts. Anyway, the method works, and it is perhaps the simplest one of several."

"Very interesting," he commented.

"Very. Now, if you are still interested, focus your binoculars and graphically strained light rays on her majesty and measure the pulse of her life frequencies."

Newton took up the task with an exclamation of delight.

"You're next," he said, when finished.

"Oh, no! Not yet," I countered. "Wait until she is successfully introduced to the colony. I want to be a queen bee in a normal colony and not a queen bee in a cage."

ONE WEEK later I reported to Newton, rather nervously, that the new queen was safely introduced.

"Now, listen," I exclaimed. "You understand, I only want to make this exchange for a period of five minutes, and no longer. If I get back to humanity without difficulty, I shall consider a longer period of time for the next trip, but I can't learn much this time and be worrying about whether I am going to get back or not."

"Your wishes shall be respected. Five minutes — no longer."

I felt kind of dizzy as Newton turned those crazy looking binoculars on me. I didn't know for sure but what I had a little rather undergo a major operation. At least, in major operations, there were records to show what percentage of cases for different ailments survived. In my particular case, there was absolutely no human precedent. Even granting that Newton was the wizard I gave him credit for being, I knew that the business of tampering with my mind was risky. I might come out of the experiment

*When bees raise a new queen to supersede an old one they will sometimes permit the old queen to live for a while after the new queen begins to function before they kill the old queen. Thus two queens may sometimes be found in the same hive at the same time. A queen will ordinarily live three, four, or five years if unmolested, but she does her best work in her first two years.

alive but without any mind. Good Lord! I had rather be dead! In the latter case, I at least had the present consolation that my life insurance was paid up.

My thoughts grew hazy. I wondered if I were half hypnotized by Newton's eyes and those ungodly binoculars. Five minutes, then back to humanity, safe, sane and sound. Newton was able to manage it.

"All ready now," he announced. "If you will just step over here under the cross-rays."

I did, numbly. The intense light hurt my eyes, but, through half closed lids, I watched him make the adjustments. Then —

I might as well have been hit by a bolt of lightning. The staggering, man-killing, terrifying jolt that I received can never be adequately described. I might say that, in a way, it felt as if my life had been taken apart, resolved into as many parts as he had terms in his equations, and each part separately treated to hell's fire and brimstone. It was over in an instant, however, and the pain was gone.

THINGS SEEMED so strange. I was different. I struggled to place myself — to raise my hands to my face to see if I was still here, or somewhere else, and I found that there was no physical response to my will. Then, suddenly, I realized that that, which I had expected to happen, had actually occurred. My own single unit of human intelligence, that which I call I, was now bound up in the physical confines of a queen bee! In spite of the fact that I had expected it, it was a staggering thought to find that I actually was an insect. I had no hands, and no face to raise them to!

These thoughts occupied but a moment before the physical senses of the queen bee's body that I now occupied began to make themselves more manifest. There was a sense of hearing that I recognized as such, and a sense of feeling. Struggling to forget the turmoil in my consciousness, I concentrated on these senses to more thoroughly interpret the impulses to my brain.

There was a slight buzz about me. I had thought so at first, half-consciously, and now I was sure of it. And — why, yes, there were a number of worker bees massaging my body with their mandibles. One was even offering me food.

Here, indeed, was a real problem. How was I to take that food? The human impulse to open my mouth failed entirely, for I had no human mouth to open. It was at once apparent that I must endeavor to establish controlling contact with the nervous system of my new body in order to govern it. How could I? While debating the problem, I attempted to shift my position slightly, much as a human does when he is uncomfortable, or fidgety, and

I found to my delight that four of my legs moved. The return impulses that told me that I had moved by means of my legs seemed to reveal the key to the situation in a manner very difficult to describe. It seemed that I must first become cognizant of the parts to be moved, and realize a sense of possession. In a moment, I had fluttered my wings. With the greatest delight in this success and an incomparable spirit of adventure, I concentrated on my mouth parts. In a moment I was fully aware of them and what they felt like, and I had extended my proboscis to sip up the food offered me.

AT THE same time that I was assuming control of the physical attributes I was also unconsciously becoming more closely attuned with instincts that seemed inseparably bound up in the queen bee's body. Even though I was already aware of the functions of a queen bee in the colony as a matter of human knowledge, I now became aware of these functions and duties from the standpoint of the bee. It dawned upon me that I had entered the body of the queen during a normal rest period during which she takes food and rests, and that the rest period was about over. The offering of food that I had received had been the last of several, and, now that it was consumed, I was expected very shortly to be up and about the business of laying eggs for the maintenance of the colony population. I, a man, expected to lay eggs! Oh, well, it was a part of the bargain, and it would perhaps be instructive to me at that.

With what was now an almost perfect control over my physical equipment, I set about my duties. Forgetting human will, I gave myself over to queen bee instinct and progressed over the combs, laying eggs in cells prepared to receive them as the urge came. It was rather an easy job, with no hurry, no fretting, and everywhere a circle of worker bees to pay me homage as I passed them on the combs. I paused once in my labors to observe the pollen dance of a worker bee, and again to observe the nectar* dance of another, those peculiar dances they perform to announce the finding of a new supply in the field. After all, the whole experiment was full of romance and adventure.

It seemed to me that I had been engaged in laying eggs for only a very short period of time when the next rest period occurred. I felt a faint foreboding, but I was tired and felt the need of nourishment, and paid it no heed. The rest period was about half over when, as I was becoming refreshed, the truth of the matter shot through me in its sickening entirety. The working periods of the queen bee cover a span of about twenty-five minutes! Good Lord! What had happened to Newton and his apparatus? I was to be

*Nectar is the raw material from which honey is made. It is the secretion of nectaries on honey plants, these nectaries not necessarily being located only in the blooms. As gathered, it is highly diluted with water. The bees evaporate the excess water from the nectar by thorough ventilation of the hive as a part of the ripening process. When thoroughly ripened into honey, the cells containing it are sealed with a capping of wax.

here only five minutes! I knew that nothing in the world that he was capable of controlling would have prevented him from carrying out his pledged word to me. Consequently I was certain that some dire catastrophe had overtaken him, and he was unable to return me to my own body. My wife and children — everything that I held dear upon the earth that I had, to all practical purposes, departed from — passed in instant review before my mind. The awful realization that some terrible mishap had prevented the successful completion of the experiment sapped my strength away.

IT WAS the following day before I could gather the remnants of my horror-stricken mind together to do any ordered thinking. I knew then that it was a day later — the night period having come and gone — and I furthermore knew that any ordinary accident that could have happened to Newton's apparatus, save possibly the breakage of the X-ray tube, could have been repaired by this time and I would have been returned. Some kind of premonition told me that I would never escape from the hive alive, and yet my saner reason told me that it was possible that the X-ray tube had broken, and that in a matter of a few days it could be replaced. I pinned my faith to this hope and set about making the best of the conditions in which I found myself.

It seemed logical to me to begin with a study of my own capabilities and my place and powers in the life of the colony. Almost immediately, in this more relaxed mental state, I discovered that a sense, granted me in my new physical equipment, was of considerable importance, and somewhat of a nature that humanity would call a sixth sense. The organs located in my antennae, those delicate little "feelers" that emanate from the head, were the means by which this sense was manifest. I relaxed still more, giving myself over as much as possible to the full play of this sense, and was delighted. It seemed double in nature, although I could never be sure whether this was the case or if there were two distinct senses. At any rate, there was a sense of location. (I recalled having observed, when still in human form, that I had almost never seen a bee leave the hive for a flight in the fields without first stroking her antennae with her first pair of legs. At the time I had assumed that she was getting her "homing instinct" into play — ("oiling up the direction finder," as I was wont to put it). This sense of location appeared to be very efficient, and I realized that the defective sense of sight granted me was of small importance by comparison. Without being aware of it, I had been utilizing this sense in making my way about the combs

as well as if I had been guided by my human eyes and the broad light of day.

My admiration of this phase of sixth sense, which I shall hereafter speak of as "location," was suddenly interrupted by the manifestation of the second phase, which was a means of communication between individuals. Without sound, of producing which a bee is capable, and without hearing, of which a bee is capable, I was being addressed through this phase of my sixth sense. I was not being *spoken to*, and yet I know of no better way to describe the transference of thought from one individual to another than to speak of it in this narrative as though so many words had been spoken.

"The nectar is good, Masoul. The nectar is bounteous, Masoul. There is plentiful pollen. Let the life of the city wax strong, Masoul. Let us raise brood to raise more brood."

SIXTH SENSE told me that I was being addressed by two workers, one an older bee with not many more days to live, and another younger bee. And, I reflected instantly, my name must be "Masoul." Probably I interpreted the meaning of the thought sense as such because I was the soul of the colony, being the mother of all.

"More eggs you would have, Owo?" I said.

"More eggs in the empty cells. It is good to fill all empty cells with eggs of the Owo. But, O Masoul, be sparing of the eggs for the drone.* Just a few of the drones. Our city is now beautiful with many drones. O Masoul, is it good?"

"It is good, Owo," I replied.

Something about it all seemed so droll that I would have laughed if I could, and yet it was utterly serious. I resolved upon an experiment.

"There will be more food for me if I lay more eggs, Owo?" I asked.

"The food will be good. It will be plenteous, Masoul."

"That is good. But, Owo, please instruct my nurse bees that, while I find the nectar from the mesquite and the pollen from the goldenrod go to make a delightful food, I would like a dessert of royal jelly."**

THE EXPERIMENT was successful from the standpoint of demonstrating a point. I knew, without question, that the thought had emanated from me through sixth sense. I also knew

*The male bee.

**A white, jelly like substance secreted by nurse bees, which is used to feed those larvae which are intended to develop into queen bees. Chemical analyses of the foods given to queen larvae, worker larvae, and drone larvae show that they differ materially in the relative percentages of protein, fat, and sugar. The nurse bees must have a diet of both honey and pollen in order to produce these foods.

that it had not properly registered in the consciousness of the worker bees. They were creatures of some intelligence, but which intelligence was dominated by the binding chains of instinct. Instinct told them to feed the queen a predigested food of pollen and honey and they could do no other way. They could not vary the proportions, nor could they produce royal jelly for my consumption. Royal jelly would never be produced except under the stimulus of a developing queen cell in the hive.

"There will be plenteous food for Masoul," was the reply, and that settled that. I had learned that any attempt to change the routine of life in the colony would be beset with difficulties.

The days began to pass in dreary succession. The only diversion granted to me was to think, and because that process was usually far from being pleasant, there were long periods when I was practically nothing but a machine. I laid the eggs the colony demanded, and it is doubtful in my mind if ever a natural queen laid eggs in such symmetrical patterns, or skipped so few cells as she progressed over the combs.

Occasionally, however, I found myself thinking fast and furiously, usually raging against my fate and the loss of all connection with those I held dear on earth. Self-abasement was often a prominent note in these mental sprees, and each left me a bit more discouraged and dejected. There seemed to be no hope of improving my condition. Even my greater intelligence apparently would not allow me to speed up to any appreciable degree the processes of evolution so that I might effect any changes. As a matter of fact, I was not able to conceive any changes that I would like to make, that would in any wise alter the fact that, after all, I was queen bee, doomed to exhaust the vitality of my body in the laying of eggs, until age overtook me and death came. Furthermore, I was unable to conceive any means of my own by which I might be returned to humanity. I did not blame Newton for his failure to return me to my own body, but I would desperately have liked to know what had happened. In my discouragement and despair, I relaxed into a state of tired, dull, half-conscious dreaming, allowing queen bee instinct full control in governing my actions.

THEN CAME the havoc. What kind of mental reaction, if any, is produced in the brain of a normal bee by the smell of pungent smoke I did not know nor care. With me, it wreaked destruction. The first blast of smoke welled up through the hive and strangled me. The fact, that I knew what the smoke was for, was no consolation. I knew that a man was about, and there was no doubt

in my mind but that the man was my own father. I remember instantly that he always smoked the bees far more than I did, and I despised him for it on the instant. He knew that smoke takes the fight out of bees that would have stung him, and that these bees, instead of stinging, become demoralized, and start gorging themselves on honey from uncapped cells. Another blast of smoke surged up through the hive to deal me misery, and I fretted and fumed and swore. Forgetting for the moment that the smoke at the entrance was only preparatory to opening the hive, I dashed madly for the top, only to be greeted by the full benefits of a hot, strangling blast as the cover was lifted. Memory returned, and I sought fresh air at the bottom and near the entrance, where fanning bees were laboring to clear the hive of smoke.

It seemed to me that the examination of the colony must have lasted for fifteen minutes. There was no robbing of the hive. It seemed that my father was merely looking things over to see how the colony was getting along. One by one, the frames of comb were lifted from the hive, examined, and replaced. I recalled that in days gone by, when we had worked together in these examinations, we always kept a sharp look-out for the queen to see that she had not been accidentally killed on the last examination, and I knew that he was looking for me. I did not wish to be seen, for I was in no mood for any closer contact with a human and his terrible smoke than could be avoided. I managed to avoid the frames that were lifted for examination, and to lose myself always in the largest group of bees that could be found. If my father wanted to know that the queen was still alive and healthy, he could determine that by looking for eggs. At the end, the hive was closed, and I breathed a sigh of relief.

The excited activity of the worker bees in clearing the hive of the last vestiges of smoke was efficient and orderly, and accomplished results in a remarkably short time. It was an hour or so, however, before the usual colony activities were resumed, for, on the first blast of smoke, instinct had caused vast numbers of the bees within the hive to gorge themselves on honey from the uncapped cells. Instinct had told them that there was trouble; that they might lose the last drop of the sweet fluid; and that they would need all they could hold, a supply sufficient to last for several days, with which to make a fresh start. Time was required for the scare to pass away and for these bees to disgorge themselves. During this time I was left to my own devices.

IT WAS perhaps best that little attention was paid to me, for I was experiencing the utmost in mental turmoil and agitation. I am quite unable to explain just how those strangling fumes

worked the change in me that they did, but the fact remains that my outlook on my life in its present conditions was considerably changed. Previously, I had been human in a different form; now, I found that I was neither human in mind nor yet entirely bee. I might say that my mentality was brought more in accord with the self-preservation instincts that are typical of the bee, and that my human intelligence went through a change which did not erase its ability to reason, but which threw its sympathies with the bees more than with humanity. The terrible discomfort I had suffered had removed from me in some way the last vestiges of human emotion, and I can say now, though with regret, that love for my family did not exist. Memory of my previous emotional life was vague, and any recollection that I cared for my wife and children, or any other human, was of no consequence. It mattered only to me that I knew that I was an unusual queen; that I had reasoning powers that were now diabolically cunning; and that such reasoning powers could operate to their fullest extent without losing in any way the connection between them and the natural senses and capabilities of the queen bee body that I possessed. Along with this introspection that revealed my powers, I was conscious of the fact that seeds of hate for the robbing, smoking humans had been sown, and that I expected to use my reasoning powers to fight humanity and its meddling with our colony life to the fullest extent.

There were signs that the orderly work of the colony was about to be resumed, and I prepared for a round of egg-laying. I had made the rounds of the combs since my stay in the hive, and it was now time to begin over again, where I had originally started, where I knew that bees would be crawling out and vacating cells. With a firm step and a directness of purpose, I made my way to this section, only to find that I was a bit early. I had done good work in the last twenty-one days, and had filled all available empty cells in just slightly less time than is required for the original eggs to hatch, pass through the larval stage, and pupal stage, and emerge. There was nothing to do but wait, and I was suddenly grateful for the rest. I had some hard thinking to do. For the moment, I began a review of the things I knew about colony organization.

WHEN NECTAR is plentiful and there is much work to do in the fields, the average life of the worker bee is about six weeks. The first two or three weeks are spent within the hive, where the worker does such inside duties as comb building with the wax secreted from her wax glands, ventilation, cleaning, standing guard, and feeding the young larvae. The remainder of her life is

spent in field work bringing in loads of nectar and pollen for use in the colony. At night, when more nectar is being brought in than is required to meet the daily needs of the colony, these older bees assume the additional duty of augmenting the force of bees that ventilate the hive in order to hasten the process of ripening the nectar into honey. Thus, when the season is good, they work themselves to death. Hundreds of them fail to return each day, probably because worn-out wings are unable to carry the load.*

As far as I was able to determine, there was no social organization nor duly constituted authority established to administer colony affairs. The younger bees did the inside work because it came natural to them and because there was inside work to do. The older bees gathered nectar and pollen because instinct bade them do so. Instinct was the same in them all and governed their actions. The same instinct caused them to feed me greater quantities of food as more food was available in the field, and the natural result was that I laid more eggs to replenish the population. If the flow of nectar diminished I was given shorter rations, laid fewer eggs, and the field bees lived longer. They regarded me as a necessary item, of course, but only as an egg-laying machine. If there were any vested authority within the hive, it rested solely with the middle aged worker bees in the prime of their lives as a group, and as instinct affected them.

It was time to make a change. I expected to take up the reins of supervision myself and control the destinies of the colony. There was no time better than the present in which to begin. Several of the middle-aged bees passed close to me and I halted them with the sixth sense.

"Owo," I said, "I have long been your faithful servant and have done well in filling the cells with eggs. Is it not so?"

"It is well, Masoul."

"I have followed your orders to lay more eggs for more brood under your able direction," I continued.

"It is well, O Masoul," was the reply. "We of the Owos know best how to direct you."

"You lack a whole lot of knowing what is best for you, for me, or for our beautiful city, Owo," I retorted. "I, Masoul, know best. From now on I am chief supervisor of all activities. You understand?"

PRIOR TO that change which was effected in me by my terrible ordeal at the hands of my father and his ill-smelling smoke, I would not have been able to get this idea across. Now, however, I was in more closely adjusted tune with my bee in-

*During the height of the season the population of a strong colony of bees will run about 60 to 70,000 individuals.

instincts and senses, and the thought registered perfectly. I was delighted, even though the results were not satisfactory. The immediate reply showed this.

"It is not according to the age old plan, Masoul. We die soon, to be followed by others who die soon. We have age. The life of the ages back is in tune with us, and we know from the ages. You must serve us as Masoul has always served us."

I knew that what they meant was that instinct was stronger in them than in me, therefore, according to instinct, they should direct. The queen of the colony, preceding me and from ages back, had been a creature of less intelligence than even the workers, and that she had always followed the direction of the workers in whom instinct was strongest. They did not know that I was different.

"Owo," I replied, "the ages are dead. My Masoul mother is dead, and I am different from her. I have the ages in me, but I also have the future. I am different. I am stronger than you as no Masoul has ever been. I know best. You will follow my direction."

I had made a distinct impression, possibly because my will was strong, but I did not take time to rejoice over it. I was surging forward.

"What would you have us do, Masoul?"

"I would have you prepare yourselves to fight away the smoke and the man. You enjoyed them?"

"We did not!"

"I will deliver you from them. We will gather nectar for our own use, and not for the use of man. We will have no more smoke after a while. We will have no more robbing after a while. We will conquer man. But it will take planning and organization."

"O Masoul, if you can deliver us from man and his smoke, we shall have even a more beautiful city."

I properly understood this to mean that life would be more pleasant.

"Very well, Owo, we shall begin. You have six legs. You can count to six?"

"We can number for our legs, Masoul."

"Then I direct you to form a guard of seventy-two bees, and yet another guard of like number, and yet another guard. You do not comprehend seventy-two, but I shall teach you. Choose you from among the aged field bees the number of six, one for each of your legs, and number one leg for these six bees. Do this again for another leg, and again until you have six bees for each leg. You will then have thirty-six bees. Choose another thirty-six bees, and then you shall have the seventy-two bees which I charged you

to get. We shall call this the number one company, and the first six bees shall be leaders. I want three companies.

BY DINT of much effort and repetition, I got the idea across so that these workers knew just how to choose three companies of seventy-two bees each. I had rather have had companies of an even hundred, but this, I felt, would require too much effort.

"We shall choose the guard from among the old field bees, Masoul."

"It is good, Owo. And I have fair reasons to choose the guard from the older bees, as you shall see. You remember the smoke today?"

"We were present, and we suffered much."

"How many of my bees stung the man? How many of my bees died?"

"But one of us stung the man. She lost her stinger and died. Two bees were crushed by his clumsy hands as he went through our beautiful city."

"Were they old?"

"The two crushed bees were young, Masoul. The stinging bee was old."

"The stinging bee was old," I replied. "She would have died soon. She lost not many days of useful life in gathering the nectar by stinging the man. It is better so. If young bees sting the man, then we lose many days of life, and our city loses. Let not young bees form the guard to lose many days of life. Let always the guard be formed of old bees who have not many days to live. Are my thoughts not wisest, Owo?"

"O, Masoul, you have more than the ages in you."

"Then be about your task. When you have organized the three companies come again to me, and I shall further direct."

"We go."

IT OCCURRED to me when they were gone that I had taken a tremendous responsibility upon myself. From now on I had to perform in order to warrant the confidence I had just gained. If it required only the skill and patience necessary to keep a military organization on duty and suitably directed, I had little to worry about, for I felt completely capable of that feat. On the other hand, I was not sure that a military organization such as I planned would accomplish the results that I had promised to free the colony from the meddling of man. If the first step failed, I must think of something else. If I failed altogether, then what? To tell the truth, I was suddenly a little afraid.

My newly found worries were short lived. Underneath my feet a young bee was gnawing away at the capping covering her cell as she prepared to emerge. I moved away to give her room, and began to reflect upon the subject of how difficult it was going to be to persuade a company of seventy-two bees to attempt to sting a man all at once. I did not reflect on this subject long.

The emerging bee completed her task, stood for a moment drying her wings and massaging her antennae, and then became aware of my presence.

To put into words of the English language the thought that emanated from the young bee is an extremely difficult task. In English, it almost sounds ridiculous, yet, from the standpoint of its startling effect, she might as well have spoken the following:

"Why, hello, Mom, old girl. What the Sam Hill are you doing here? What am I doing here?"

Having finished approximately this thought emanation through sixth sense, the newly emerged worker was quite evidently as surprised as I, and incapable of further communication at the moment. To say that I was surprised would be putting it mildly. Paralyzed, I clung to the combs, my mind alternately racing in thought and frozen in consternation. At length I recovered sufficiently to "speak."

"What did you say, Owo?" I might say I gasped.

"I hardly know, Masoul. What is this? What is it all about? I find myself a newly emerged bee. Instinct pictures my life plan before me, and yet it does not seem quite right. Why should I be a bee?"

THERE COULD be only one possible explanation of this most unusual situation wherein a worker bee seemed to exhibit an intelligence akin to my own, and I conceived it. In haste, I proceeded to explain to this new worker my theory of how it came about with the intention of enlisting her aid in explaining to the other thousands of workers that would be emerging from now on.

I told the new worker that mentally I was human, and physically a queen bee. Passing briefly over the fact that my intelligence had exchanged bodies with an insect as the result of an unfortunate experiment that had been only half completed, I next informed her that she was the first offspring from eggs laid by my body after the change. As such, through the operation of hereditary laws, she had been endowed in half with human intelligence, doubtlessly of limited capabilities by virtue of the fact that half of her hereditary gifts came from the drone father, which had mated with my queen bee body before my occupancy,

and which drone was, of course, merely a normal male bee. I told her that I could expect much more from her in the matter of cooperation, and from her new sisters, than I ever could from those workers which had developed from eggs laid before that fateful experiment 21 days ago. Still more briefly, I explained that I had assumed control in the colony for the betterment of our lives, and that I expected her and her sisters to fall readily in line. The reason for my haste in this explanation was good, for all about me young bees were gnawing away the cappings of their cells. I dispatched the new worker to the nearest with definite instructions to repeat this story to the emerging bees as quickly as possible.

I repeated my story to a half dozen surprised new workers, organized them into a corp of instructors, and then obtained respite. My instructors worked fast and each new bee became a recruit so that my services were no longer needed. My prediction had been correct, for each new bee was found to be half-human in intelligence.

I WAS glad at the cessation of my labors, for I wanted to think. Certainly I must be right, but how? Another bee with intelligence derived from me! It seemed preposterous, but it was so. I had dismissed the problem as solved in my first haste by assuming that hereditary laws were responsible without knowing exactly how. Now that I had more time to think, the complete explanation gradually worked itself out in my mind.

I had entered the insect body and had taken complete control of its functions. The body muscles responded to my will, thus indicating that my mentality was in controlling contact with the nervous system. If this be so, and it certainly was, then why should not the bodily processes, through which chromosomes are formed, also be in tune with my life through the nervous system equally as well as it was in tune with the former queen? The results proved the point. Then again, I thought, the capacity for intelligence must certainly be a dominant factor as treated in the Mendelian law of inheritance and not a recessive factor. As such, it would certainly be transmitted to the offspring. Dismissing the problem as solved in so far as I had need to solve it, I deliberated upon the vastly changed circumstances.

THE ENTIRE population of the colony would be of my own offspring in a few short weeks, all half human in mind, and the work of organization, planning, and execution of details would be vastly simplified. I might even go so far as to obtain advice from some of my offspring, these being perhaps somewhat more

in tune with bee instinct than I, but this point was yet to be demonstrated and there was no hurry about it. There might even be some pleasure in existence now, with individuals to converse with. Furthermore, improved means were at my command for carrying on the fight against humanity. A sneering thought occurred to me that humanity itself recognized the fact that the mastery of the world was still in dispute between itself and insects, and that only by its greater intelligence did man have any show at all. Now things were to be changed. My colony of bees was fast becoming endowed with a certain degree of man's most important weapon. Ambition awoke in me. Such being the case, why should I not set my goal at complete mastery of the world for the benefit of the bees alone? A riotous thought that set my heart to pounding. Plans — plans — what a world of plans to be made lay before me.

Before evening came, with its cessation of field activities, those Owos that I had sent to organize companies of fighting bees returned to report the completion of their labors. I gave them instructions as to the disposition of the guard. One company was to remain in flight about the hive and at rest in the trees during the day ready to attack man at the least provocation. Another was to remain on duty about the entrance and just inside, to attack at the first smell of smoke, and another was to be on duty at the top of the hive prepared to fight if the hive were opened. It was well enough to proceed with this plan, even though I expected changes to be made as the older bees died and my own offspring became predominant.

The sun went down, and in the evening's twilight vast numbers of laboring field bees, that knew no other life than to work, returned to the hive. Some of these returned only to continue their labors by fanning their wings while others clustered about the entrance, contented, resting, and perhaps thinking of flowers. It was better not to disturb them, so I called together those bees in which I took great pride, my own offspring, for a conference in the upper portion of the hive.

“Owos, you know your existence,” I said. “You have been told wherein you are different from your predecessors. Are you content?”

The first few that I had had contact with acted as spokesmen, and I found it convenient to name these. I called them Mary, Lucille, Ann, and Betty. Mary replied.

“We know that we are as we are, Masoul. There is nothing that we can do about it. We seek that happiness that may be granted to us in our short span of life.”

“I hope that I may do much to improve your lot,” I replied.

"Your lot is most amazing and unnatural, even as mine is, and we shall work together to do the best we can."

"We are willing to cooperate, denying those instincts that tell us that we, as Owos, should direct you, not you us," said Ann.

"It is best, Ann," I said. "You are half as I am, else you would not see it so readily. And I shall always continue to have more experience than you, for I shall live through more than you, your days being more numbered."

"It is not true, Masoul."

"Perhaps not quite so convenient, Betty. For, if my plans do not work out to perfection, I shall live through more smoke than you, and smoke is most distressing."

"So instinct tells us."

"Chalk up a score for instinct. But I mean to eliminate the smoke, and to conquer man. Perhaps we may reduce the world to a land of flowers and bees in the end."

"Would we live to see it?" asked Lucille.

"I doubt it," I replied. "But during your lives we can do much."

I outlined to them the plan I had conceived of making my colony a nest of incorrigible, unmanageable and fighting demons as a first step in resisting the meddling of man. Questions were asked and answered, and I found myself surrounded by a group of bees that held me in the highest esteem.

Conferences with my new Owos were held each night for three nights, and it may perhaps seem strange to the reader that not a great deal was accomplished in the way of additional planning for future combat. The seeds of future ideas were being sown, however, for I was rather bothering over the fact that bees have to die when they sting. With my own progeny coming on, I hated to see them die even a few days before their time.

ON THE third day after the emergence of the first of my brood, I found myself over a section of comb in which I had laid drone eggs that first day I was in my new abode. Whereas worker bees take 21 days to emerge from the cells as young bees from the time the egg is laid, drones take 24 days, and I knew that these drones were about ready to crawl out. There was evidence that several were already in the process, and I decided to wait around a bit and start them on the road to learning. My loathing for the lazy drones would probably subside with my own drones showing signs of intelligence. I might even put them to work in some fashion.

The emergence of the first drone was considerably different from the emergence of the first worker. This drone, which I af-

terward named John, seemed to look me over calmly enough before "speaking."

"Masoul seems to be thinking hard with me as a subject. What is the trouble, Masoul?"

I was surprised at this comment, and taken somewhat off guard. This drone seemed to exhibit even more intelligence than my new workers, and I was unprepared for it. In a moment, however, the solution was clear, and I changed my discourse of enlightenment to this drone accordingly. I had entirely overlooked the fact that a drone bee is a development from an unfertilized egg, and that this bee in no wise owed his development to an immediate father. Such being the case, he took his heredity from me alone, and was consequently less cramped in his human intelligence characteristics than his sisters. What a remarkable situation! I realized on the instant that I might make great use of that.

In the evening, I called a conference of newly emerged drones.

"Well, boys, how do you like it?" I asked.

"Not bad," replied one I had named Paul. "We are drones, with instinct to tell us that we are men of leisure, fed free of charge by our worker sisters, and with intelligence to make the most of leisure. I advocate reorganization of colony life, with worker bees to put on shows for our benefit."

"Well, I'll be —," I burst out.

"Never mind Paul, Masoul," said John. "I think he is a misfit — a black sheep in the family. He had no sooner emerged than he started griping about the cramped quarters in his cell. Said he wished the workers would learn to build drone cells a little larger, and that his wonderful form might have experienced a fuller development in larger quarters."

"Should I decide that Paul needs attention from the workers he holds so lightly in his esteem, he will not be so handsome," I replied. "Minus a wing or two torn off by their mandibles, and with a shrunken abdomen from lack of food, his form will be nothing to brag about."

"MASOUL," SAID another I chose to call Fritz, "I have talked with several of my brothers since emergence and we are of the same mind. We have instinct that tells us what is expected of us, which is nothing, of course, there being no mating to be done*. But, Masoul, the intelligence we possess is to our liking, and we find that we do not wish to be considered lazy individuals with no

*A virgin queen takes her mating flight when she is from five to eight days old, weather permitting. She soars high into the air and mates with a single drone, this drone dying instantly in the act. On her mating flight she receives enough of the male sperms to do her for the rest of her useful life, the quantity of individual sex cells being measured by the millions. Only rarely has a queen been known to take a second mating flight.

aim in life. Could you, Masoul, find us anything to do?"

"You did not come equipped with physical attributes that would enable you to do many things the workers do," I answered. "You have no pollen baskets on your legs for the gathering of pollen, and, for similar reasons, you can not gather nectar from the fields. Without wax-secretion glands, you can not build comb. But I think I can find inside work for you that will help the city by removal of that many workers from those duties."

"Let us hear, Masoul."

"You have not yet flown. You will leave the hive in a few days to try your wings in flight, and make them stronger. You will note the wonderful buzz that you will make with your wings, for you are strong. Therein lies your only chance of being helpful at present. You shall use your wings for fanning, and with your magnificent wings keep the city ventilated to perfection. Is not all this a worthy occupation for you?"

"That sounds like work," lamented Paul.

The next day Paul started on a diet of nothing, followed by nothing, at my orders. He was dragged from the hive three days later by two capable Owos and left to die some distance away. I had no time for such characters.

THE FOLLOWING evening I talked with a considerably larger number of drones.

"More possibilities are unfolding before me," I began. "It furthermore gives me great comfort to be able to talk things over with you, for your intelligence is freer from the chains of instinct that bind my Owos. Let us work together for the carrying out of our plans to make our city supreme over humanity."

"We are most willing, Masoul," said Omar. "Even though we take heredity direct from you, you are still greater than we. Dictate, Masoul, so that we may follow with the gift of your intelligence."

"Omar, your words are wise, and yet too modest. If I shall dictate, let it be with consideration, and should you perceive, then, by all means, give me the benefit of your perception."

"Masoul, you welcome free discussion with us concerning your plans?"

"Most heartily, Omar."

"Then, Masoul, what plan have you for your successor? Instinct tells me that you will live not always, and that, in the tomorrow of nectars, your Masoul daughter will mate with one of my yet unborn brothers. What shall we do?"

To tell the truth about it, I had not given this much consideration, and the question was somewhat staggering. But, for the

sake of wholesome respect, I had to keep up appearances.

"A problem of tomorrow's nectars, Omar, requiring thought between now and then. I have not yet determined fully. Think about it, Omar, and give me the benefit of your thoughts."

So I successfully parried the question. But my relief was short lived, for Fritz was as bright as Omar, and he absorbed my attention.

"Masoul, the workers of the guard die when they sting the man?"

"It is so, Fritz. It is for this reason that I form the guard of older bees who are doomed to die soon anyway."

I was distinctly proud of this idea.

"It is wise, Masoul, and your mind is great," continued Fritz. "But why do the Owos die? We have no stings and we do not know."

"It is because the Owo's stings are barbed. They lose the stings in the flesh of the man they sting. The injury causes them to die. My sting is not barbed."

"It is unfortunate," commented Fritz sadly. "It is not right they should die."

I was disturbed again. Something in the lamenting tone of Fritz, as he regretted the fate of his sisters of the guard, seemed to imply that he seemed to think that I should be able to remedy the situation, or that he would be distinctly glad if I could. That was enough I brought the conference to a close for the evening, but not before appointing Fritz and Omar as my immediate assistants and advisors.

THE FOLLOWING day was historical in my existence in the colony. The smoke came about midday. At first, there was only a trivial attack. A few blasts of smoke at the entrance caused me dire discomfort, but they were of short duration. My first two companies of bees went into action, and 25 bees from the two units died from losing their stings. I did not wonder that the man retreated, but he was game, and I marveled at his courage. He returned in a short while, this time heavily dressed, wearing bee veil and gloves, and we suffered at his hands. When he was through, and I thought I was half dead from smoke, we found that robbing had taken place, and that we had lost much ripened and capped over honey. My rage knew no bounds.

When evening came, I was an excited leader over the conference, and this time the conference was graced by the presence of a number of my own Owos selected with my utmost care. I began by addressing my remarks to the group.

"We have once more suffered at the hands of man. We have

taken our toll in a measure, but he has taken his toll. The man does not rejoice over his stings, and we have begun the war. His toll was heavy, for he had taken much honey that would have nourished as well when the nectar is no more, and the cold causes us to huddle together. We have lost our first battle with him, but there shall be more in which we shall not lose. It is time to carry the war to him; not let him bring it to us. Hear my words.

"Fritz, you were sad that your worker sisters die as they sting the man, and you caused me much thought. I, too, am sad. It must not be. We can not always fight man so if our success be no greater than today. Therefore, I say, the workers of the guard shall no longer die. They shall no longer lose their stings, and every worker shall be a fighter. We shall carry the battle to the man. We shall seek him out and sting him. We shall attack him in great droves and seek to kill him. We shall seek out his woman and sting her, and his children. They can not wear the veil from dawn until evening, and we shall kill them if we can. If we can not kill them, we shall drive them away.

"This is my plan. My Owos will not die if their stings have no barbs. Therefore, we must remove the barbs. I know the way."

There was a chorus of questions from many in the group.

"The way is easy, and yet it may be hard."

MY PROPOSITION was to assign a certain number of workers, say twelve, to the duty of finding a sand bed, and, having found it, to bring to the hive large numbers of sand grains for my inspection. From these, I would pick two having sharp edges of the most perfect form suited to the need, the remainder to be carried away. Having selected two suitable grains, I would then assign workers to the duty of mounting these securely in one corner of the hive where they would be readily accessible and yet obscure to the man. The mounting was to be accomplished by the use of propolis, a gummy material obtained from the buds of poplar and other trees and known as "bee-glue" which is used for sealing cracks and for other purposes. It would require the utmost care, for the sand grains were to be mounted with meticulous accuracy, the spacing between the cutting edges probably requiring an accuracy down to one one hundred thousandth part of an inch. After the sand grains were mounted properly, the next step would be to have each worker bee in turn thrust her stinger between the sand grains and shave off the barbs. Any worker could then sting the man with impunity and repeatedly. My guard could be chosen from bees of any age, and the entire population of the colony would serve as reserve forces."

It was not at all difficult for me to sell this idea to my followers,

but the matter of making clear to the workers just what sand grains are, or where they would be found, was extremely difficult. In the end I made arrangements to fly from the hive with a limited number of workers the next day, all instincts to the contrary notwithstanding, and personally take part in the search for a bed of sand.

Luck was with me the following day, for I found a suitable bed of sand in a creek bed in a relatively short time, and my accompanying workers brought back dozens of grains on the first trip. Not one of these was suitable, however, and I detailed fifty workers to the duty of bringing sand grains to the hive.

It required two days' time to find two grains of sand that had sharp cutting edges in a straight line sufficiently long, and I was heartily glad when this step was over. I had looked at sand grains with my poor vision and had utilized my sense of location to such an extent that I was most thoroughly worn out, for I had endeavored to carry on my usual duties of egg laying at the same time. Little did I then suspect, however, that the hard part was just about to begin.

BEES ARE credited with marvelous accuracy in building their combs with cells in the hexagonal shape, of given size, and with certain angles to give the greatest economy of wax together with maximum strength. I had found the comb work in the hive to be marvelous, especially considering those cells in which I laid eggs, and I had relied upon this accuracy of workmanship to make the matter of mounting the sand grains a simple matter. I was badly disappointed. Bees have built combs for ages, and instinct tells them how to build it well. Bees have never mounted sand grains by means of propolis for the purpose I intended them, and they knew nothing about it. Six of my own Owos labored long and hard at the troublesome task and made small progress. Time and again the mounting was finished only to be torn down and started over, either because the sand grains were too far apart or too close together. More than one of my Owos would have lost their lives in trying out these shears when it was thought that the perfect dimensions had been obtained, had it not been that my intelligent Owos were able to undo what they had done and remove one grain when it was found that the experimenting bee had hopelessly bound her sting in the shears. The first day of failure made me extremely impatient, but the following day I regained some of my patience and resolutely assigned a detail to the duty of completing the shears whenever it could, working continuously on this one job. In the meantime, I had other details to think about.

The somewhat disturbing thought that perhaps I might not win in my battle with man kept bobbing up. The fact that man may provide himself with veil and gloves to protect his face and hands and dress heavily to avoid stings on the body gave me no little concern. The man had deliberately robbed my colony after twenty five of my guards had stung him. A thousand bees might sting him without his safeguards, now that I planned to remove the barbs from their stings, but if my fighters could not get to him, the battle would be lost. On the other hand, he could not wear these safeguards all day long and each day, and my bees could sting him freely when his safeguards were off. But what reaction would come? I could guess the answer to that. Knowing that this colony was becoming incorrigible, he would in all probability obtain a new queen from a professional queen-breeder and introduce it to my colony after he had searched me out and killed me. This thought at once modified my plan of action.

BRIEFLY, I must not carry the battle to the man until I was fully prepared. I would proceed about the business of removing barbs from the stings of each and every worker bee, but I must wait until all were my own offspring so that I might be more able to instruct them in the art of fighting. I believed that I could teach my half-human-minded bees to crawl inside the man's clothing and sting him at such times as he was heavily dressed. This was one point, but it was not sufficient.

Man is obstinate, and hates to be outdone by animal or insect. My ultimate fate would be to die at the hand of man, but so great was my hate for man that I did not care. When I was gone, however, I would not be able to carry on the battle; therefore, I must plan for the future about which Omar had asked. Not only plan, but I must act now, and the action required that new queens, Masouls, be reared at once. I would send these queens from the hive in swarms to establish homes in hollow trees and caves so that my blood would not be lost; and so that the battle to last for years would be carried forward by an annually increasing number of colonies. Personally, I preferred to remain in close contact with man, fighting him until death, and I would not follow the instinct that directed that the old queen leave with the swarm. Then the matter of the characteristics of my Masoul daughter occurred to me.

She would not be as I. Being raised from an egg exactly similar to those that produced my half-human-minded Owos, she would be as they, and would have only half of my capabilities. But then the remarkable side of it occurred to me. In mating with one of my own drones, she would have offspring even better than

mine, for they, taking one half of one half from their mother and a full one-half from their drone father, would be, I might say, three fourths human minded. What an idea! Let us rear a new queen, keep her in the colony for a time, and rear yet another queen from her eggs to mate with one of my own drones. Thus would be produced a queen having three fourths of my capabilities who would produce offspring having seven-eighths of my capabilities. This fraction could be increased to almost unity after many generations, and it would not matter at all that I died. I settled on this plan immediately, determined to study new queens and new brood intently, until such degree of perfection was reached that I would feel safe in directing the casting of a swarm.

Before giving further attention to the construction of the barb shears, I personally attended to the matter of directing the construction of a queen-cell. I selected the most perfect appearing egg from a large number, and directed that a queen cell* of the largest, most perfect form possible be constructed, and that every care be exercised in giving the developing larva the proper food. This work had been under way for a week, and it was almost time to cap the queen-cell, when I again visited the site of the barb shears.

NO PROGRESS had been made whatsoever. The shears had been reconstructed perhaps thousands of times, and my half-human-minded Owos were showing a real characteristic of humanity as opposed to the bees. They were becoming discouraged. I found it necessary to take a hand, not only to accomplish results, but to maintain respect. I studied their methods and then conceived the means.

I directed an Owo to find a dead Owo and bring her back to the hive. This being done, I directed that she be dissected to the extent that her sting could be removed, and this was done. I then directed that one Owo grasp the base of the sting between her mandibles and draw it back and forth between the sand grains as other Owos manipulated the propolis mounting in such fashion as to gradually bring one sand grain up to the other with the sting between. I stood by to watch the results. Gradually, the two sand grains were brought closer together until there was no clearance between them and the sting of the dead bee. Then contact was made, and a minute quantity of the barbs was sheared off. Still closer contact was made, and every last vestige of the barbs was removed. I halted the work, directed that the grains be securely

*Natural queen-cells are usually constructed by the bees along the lower edges of combs or in the corners, and they point downward. Numerous queen-cell cups, which are the bases of such cells, will usually be found in any colony. When the bees are ready to rear a queen, either the queen deposits a fertilized egg in one of these cups, or the workers transfer a fertilized egg from a worker cell to a cup. From then on, it is a matter of feeding the developing larva the properly proportioned food and building the cell down to enclose the larvae.

fastened so, and asked for volunteers to try the shears. A dozen stepped forward, thrust their stings through the shears, and had the barbs removed without one iota of ill effect. I rejoiced that success was mine.

Perhaps half of my colony had used the shears when the smoke came again. At the time, I could not quite account for the manipulation the man made. We had already been robbed, and we had not yet accumulated enough stores to warrant another robbing. I could only guess that the man was angry because we were intractable and was looking us over for whatever he might find. He found the queen cell, which had now been capped, and, to my extreme disgust and surging hate, he removed it. If I had been human, I am sure that I would have died of brain trouble of some sort, for my anger, rage, and hate consumed me. Not only did the smoke make me as sick as ever before, but my plans against the man were retarded by man's own hands. I can not describe it, so the subject may well be dropped.

There was nothing to do but start over again, and I directed the construction of a half dozen new queen cells in as remote corners of the combs as possible. I also directed that, should the hives be opened again, large numbers of Owo cluster over these cells and hide them from view as much as possible. In the meantime, every Owo passed her sting through the shears and was made a fighter of no mean possibilities.

Under the stress of disappointment, hate, and foiled plans, I lost my judgment, and directed that the fight be carried to the man at once with barbless stings in the hope of killing this particular man at once. I directed that a company of two hundred bees seek out man and his kind every hour of the day and sting him unmercifully. The havoc this campaign wrought I learned about fully at a later date. My wife and my children were forced to stay indoors, but my father took action.

In justifying my action, I contented myself with the thought that I had taken it up with Omar, Fritz, and others in my council of drones and obtained their assent. I overlooked the fact that in successfully completing the barb shears, and in planning for the breeding of my successor, I had so completely won their confidence and respect that they had virtually become what humans call "yes men." They regarded me as wise beyond comprehension, and thought that I could not fail. They sought to aid me in carrying out my plans rather than in looking for possible defects. But perhaps it was better so.

THE DAY came very shortly when I realized that my father would not give up an inch in his battle with my brood. The new

queen cells were only fairly well under way when he came again with the stench of rolling, billowing clouds of smoke, and dressed to perfection as a guard against stings. I was shortly very nearly unconscious, for I had never before experienced such terribly thick and completely awful clouds of smoke. They rolled about me, and obscured my vision, and so distressed my breathing that I was incapable of any degree of muscular activity. In this condition, I was barely conscious that the hive was being most thoroughly searched for my présence, and, in the end, I was found.

In the few short seconds when a person realizes that death is inevitable a myriad of thoughts can race through his mind. It was so in my case. I saw the approach of a bright, shining tool, and I realized that the end was near. I recalled that bright tool. It was a pair of thin nosed, nickle plated pliers. I had used those same pliers, in company with my father, in picking the queen from the combs that my body had replaced. Now it was my turn! My father probably reasoned that the offspring of the new queen would be more easily handled. There was no reason why he should not think this, for ordinarily, the bees we kept were not at all ill-tempered. He very likely thought that, while my parent stock was probably satisfactory, I was a freak that produced near demons instead of bees.

I had perhaps a split second to think these things out as I saw the approach of the pliers. I was too weak to run or fly. I attempted to give orders to those workers near me to never accept the new queen he would introduce but I was too late. The pliers closed on my thorax, and I was lifted from the comb.

I did not meet instant death. The principal contents of my thorax were muscles for driving my legs and wings which were attached thereto. The heart and other vital organs reposed in my long, slender abdomen and these were unaffected. While I knew that death would untimately come as a result of the complete crushing of my thorax, I could only suffer untold agony at the moment. When cast aside, I fell, mortally injured, in front of the entrance to the hive.

FROM THE point where I lay I watched the activities as I suffered in silence. The heavenly fresh air on the outside, totally free from the strangling fumes I could see emanating from the smoker, was a blessing indeed, and cleared my senses. I saw my guard fight the man and was proud of them. They flew before him in droves obscuring his vision, and retired for the moment only when greeted by a blast of smoke. I could see the man wince and slap at his body, and I knew that some of my beloved Owos had penetrated his clothing, to meet their deaths in the per-

formance of the duties I had assigned them. I did not relish the thought of dying and leaving such loyal subjects behind. I had learned to love them, just as I had learned to hate mankind.

I was almost gone when the man retired. I was missed in a short while, and a number of my faithful Owos, searching for me, came upon me on the ground. A little while longer and they would have been too late.

"Oh, Masoul, what has he done?" asked one of my most trusted Owos.

"He has killed me, Owo," I replied. "In a short while I die."

"Then what can we do?"

"Has he placed a new Masoul in the city?" I asked.

"That he has, and she smells not right. We have tried to kill her, but we can not reach her."

"You will reach her in a few days, and then you must kill her, even though her smell is good. You understand? You must kill her."

"Masoul, we may kill her, but he has destroyed our queen cells. What shall we do for Masoul?"

I thought a moment before replying, and when I "spoke" again, the clouds of death were hovering near.

"Owo, my faithful Owo, hear me. I laid eggs today, and in three days they hatch. After one or two days, the young hatched larva is not good with which to rear Masoul. You must work fast. I charge you, Owo, select a great many Owos and fly to the woods. Choose a hollow tree that is remote from man and hard for man to find. In that tree build comb rapidly ere the three days expire, even if it be but a small amount. As soon as this is done, choose three or four eggs and fly with them to your new city, and rear Masoul there. Take with you my drones. One of them shall mate with new Masoul. When Masoul lays eggs, come back to this city, and persuade every Owo and drone to fly with you to the new city. Carry with you all the honey you may. Rob this city for the benefit of the new. Abandon this city when the new Masoul shall lay eggs. Carry with you in your minds those things I have taught you, and carry on the fight against man."

If I had been speaking by the use of vocal cords and respiratory apparatus, I am sure that the last few words would have come in gasps, or perhaps not been said at all. Sixth sense was failing me even as I endeavored to emanate the last of these thoughts, and I was not sure that they were all properly comprehended. I "heard" no reply for the dark clouds that were hemming me in settled closer until it seemed that they covered my pain-racked body with down softness, and I went to sleep — blessed, restful sleep.

I DO not know, of course, just how long the reverse transfer took, but it seemed to me but an instant before I was again conscious, and in human form. I opened my eyes, cautiously, half fearfully.

Directly in front of me a few hundred feet away I saw a rather large, red sandstone building. There was a helpful sign across the entrance to disclose its identity. It read: "Dr. Ray's Sanitarium." There was a large, beautiful, shady lawn between me and the building, with here and there a patient in a wheel chair with attendant nurses. Restricting my gaze to my own vicinity, I found that I, too, was in a wheel chair, and that within a very few feet there was a quite good looking, white-clad nurse calmly reading a magazine.

It was several minutes before I ventured upon a conversation, for I wanted to make sure that I would be quite calm myself. At length I thought that my poise would be secure.

"Good morning, Nurse," I said. "Would you mind telling me just why I am here?"

I have never seen anyone so surprised in my life. She dropped her magazine instantly, and came, I think, very near to fainting.

"Why — why yes! No! How do you feel?" she gasped.

"I feel quite hungry, Miss. I'd like to have a big beefsteak smothered with onions. What are the chances?"

By this time the nurse was on the road to recovery.

"Your chances are excellent," she replied, smiling. "There won't be a one of us that won't be so darned glad to see you feeding yourself that we won't know what to do. You have been the most helpless man for the last two months that I ever saw. In fact, you have been nothing more than a lump of clay with life in it, and you would have starved to death if we had not resorted to forced feeding. But come on. You are going to see Dr. Ray before you do anything else."

My rides in a wheel chair have been distinctly limited. If I ever have to ride in another one, I hope it won't be quite so fast. Nurse broke the speed limit across the lawn.

Dr. Ray was quite astonished at my instant recovery, and asked all manner of questions, which I side-stepped to the best of my ability. He became exasperated.

"It would be a great help to us if you would give us some sort of inkling as to what happened," he snapped. "It might help us some in our treatment of Newton Ware."

"Oh, is he here, too?" I asked, instantly.

"He most certainly is. The two of you completely out were found in his laboratory in the midst of an array of broken equipment. You had apparently had quite a struggle, and we are quite

sure that either you hit him on the head with some heavy equipment, or else he fell into it with tremendous force. He has been a much better patient than you, however. Most of the time he is fairly rational, but a part of the time he sits around with his inseparable notebook, studying it, and mumbling about a constant for a queen and 'a period of five minutes, no longer.' When he does that, he sees nothing, hears nothing, and looks very much as if he has a terrible headache. His trouble is undoubtedly caused by the blow on the head."

"Perhaps it might help if I could see Mr. Ware and talk with him," I suggested. "A sudden shock, you know."

"I wanted to try that."

WHEN NEWTON was brought in I looked at him intently, spoke his name quietly, and continued to look at him.

It was apparent at once that my presence, actions, and voice were having an effect. Newton's eyes were perfectly dull when he entered the room, but now there seemed to be a trace of returning brightness appearing by flashes. The struggle within him went on for five minutes before the victory was won, but, in the end, his eyes became clear, bright, and steady.

"Well!" he exclaimed. "How did *you* get back?"

"I am asking you," I replied. "The queen was killed, and I thought I was dying, but I didn't. I came to out on the grounds a few minutes ago."

Newton grabbed his notebook in feverish haste and studied it intently. Dr. Ray looked worried, but did not interfere. While Newton was studying, Dr. Ray asked me, "What queen? What is he talking about?" but I paid him no heed. I was too much interested in my friend.

Ware put the notebook away with a very sad expression.

"I remember now what happened. The experiment was successful. But my formulas, unfortunately, did not tell me what would happen upon mixing small per cents of different intelligences. I transferred you about 98%, leaving 2% to insure the life of your body, while I transferred the queen only 5%, leaving 95% for you to ride in on top of and make use of. How did you get along?"

"Splendidly. I understand a lot of things now. The 95% was a great help. But how did *I* get along?"

"You got along horribly," he answered. "You went wild. I tried to control you and preserve the equipment, but I failed. The last thing that I can remember is that I fell violently as the result of a tremendous push. You had the strength of a mad man."

"Dr. Ray says the equipment was badly disrupted. That being

the case, can you explain how I got back?" I asked.

"I can remember that much. Your intelligence was not firmly bound into her body in the same sense that it would have been had you been born in it. When the body died, you were released. Since your own body still lived, your mind probably made the return trip with the speed of light."

Newton's face fell as he continued.

"But that is the end of the experimentation. There will be no more transfers. The particular inspiration for the conception and interpretation of these formulas, you once told me I had, is gone, and I do not understand them. In some strange way, I seem to know that I shall never recover that inspiration."

"See if you can remember this one feature about it," I said somewhat nervously. "Am I now, carrying 5%-queen in my brain?"

I THOUGHT surely that he was going to relapse; he looked so distressed, and I was sorry that I had said anything. The struggle within him must have lasted a minute.

"I am sure I do not know," he said. "You will have to determine that for yourself, if you can. Let's go home and forget it."

Not until then did we realize that we had an audience, so intent had we been on our discussion. Unfortunately for us, Dr. Ray had heard every word and understood very little. He insisted upon an explanation, and we refused to give it. He kept us three days before he would release us with a clean bill of health, and he only released us then, after I had given him my reluctant promise to send him a written account of the whole story.

My reunion with my family was joyous in the extreme. They had practically given me up as a hopeless case, even though they knew they had placed me in the care of the most competent physician in the country for what they thought was a mental disorder.

I found that my colony of bees had become so ferocious that my father had moved them to the farthest corner of the farm a mile from the house. I visited them, wearing a veil, as soon as I could with decency excuse myself from my rejoicing family.

I sat down by the side of the hive wherein I had my abode. Bees flew about me in clouds, and I was forced to keep my hands in my pockets. In a measure, I was sad. Sixth sense was gone and I could not communicate with them. Perhaps, I reflected, if I thought hard enough they might sense it.

"Owos," I thought, with the very utmost concentration; "please do not do it. I, Masoul, wish you not to. Do not sting me, for I am Masoul returned to humanity. I will take care of you and see that

you enter the winter with bounteous stores. I will not use smoke when I visit you. You may even rear a new Masoul in your own city, and we shall work together in harmony. Do you hear me, Owos?"

The reward for my effort was several sharp stings. Several of the bees had penetrated my clothing, and, with barbless stingers, were dealing me misery. I was forced to slap at them until I had killed them. I left the swarm then, knowing that I could never again communicate with them, and that, as a human, my work was cut out for me. The colony died that day as the result of poisoning with carbon bisulphide gas. I burned all that remained when the asphyxiation was complete.

THIS IS my story as written for Dr. Ray. Since he is to read it, I may as well give it to the world. While you are reading it, I shall be getting together my beekeeping equipment.

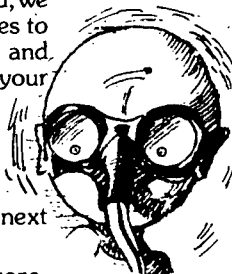
They tell me that times are getting better and that I could probably find employment if I tried. In fact, Newton Ware has found a very good position for himself. As for myself — well, I am just not interested. I am a beekeeper for life. ☹

Did you enjoy reading this issue of AMAZING? If you did, we want you to know that we will try harder with future issues to please you even more! We love working on AMAZING and want to make it a magazine that pleases you — that takes your fantasy to the beyond and back . . .

FOUR ISSUES FOR \$6.00

If you want AMAZING to come to your home for the next four issues . . . Just sent \$6.00 to:

AMAZING, Subscriptions, Box 642, Scottsdale, AZ 85252.



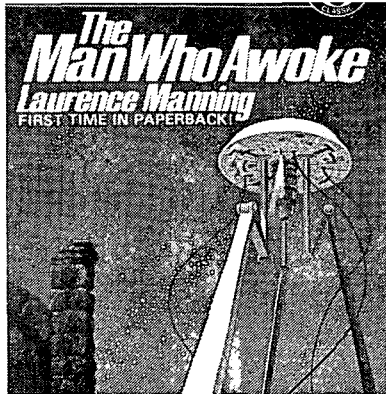
If you thought this issue of AMAZING gave you reading pleasure and you want more—ask your newsdealer for FANTASTIC SF—sold at the same newsstand—striving to give you the best and most interesting reading.

Book Reviews

found it without value. The reading is fast and light, partly due to the high amount of dialogue. Haldeman's smooth writing style is evident, as is his firm grasp of physics and space technology. I found his handling of Spock's character a little stiff and the dialect for Scotty too obtrusive.

As the story moves along, we want to find out how the Enterprise landing party can escape the metallic web which traps them in a hollowed-out asteroid, which is the home of the Chatalia aliens. The aliens think all humans are Klingons, thus suitable for target practice and execution. Scotty finds there is a power drain on the Enterprise. No one can leave the metallic web to beam back and Klingons have arrived to cheerfully plant a nova bomb set to blow up everyone in sight. The book is mildly amusing if not taken too seriously.

The Man Who Awoke, By Laurence Manning (Del Rey, \$1.75) This appeared as a serial in 1933 in Hugo Gernsback's *Wonder Stories*. Norman Winters finds a way to sleep in an underground chamber for periods of 5,000 years at a time. He emerges each time to find a fascinatingly different world. Human civilization does not evolve in a straight line toward progress and enlightenment. Backsliding is possible at any point. One civilization has given up all movement, work and creativity since it is easier to dream all day while machines create illusions in their minds of happy pastimes. Another is fighting to regain what has been lost by the wasting of oil and coal in our own time. This was the first use of the energy crisis in fiction, forty years before reality took over. At the time, 1933, it was "pure science fiction" and could be laughed at. This book is a good example of 1930's SF by a visionary man who left the field too soon.



The Enemy Stars, By Poul Anderson (Berkley, \$1.75) Poul Anderson works hard. I talked with him once about his writing projects for the coming year. He rattled off a list of books to revise, stories he was working on and a couple of novels. He scorns literary critics and admits to writing for his readers. "Old fashioned" writers like Anderson remain in print year after year while books written to please a small group of fellow writers or critics seem to have trouble making it past one printing.

The Enemy Stars concerns a starship which finds itself being drawn inexorably into a powerful burned-out star. The star died out in a previous cycle of our own universe, and thus was present at the creation of this universe. The crew members desperately try to find a way to break free. A fight between two crew members and an accident aboard the ship add to the tension. Each person tries to answer personal questions about the meaning of their lives and the reasons they went into space as they find death drawing closer.

Anderson always has a sound scientific basis for his extrapolations. He also is good at integrating the science into the action rather than allowing dry lectures of information already known by two people talking to each other. *The Enemy Stars* is good reading by an author who is a seemingly inexhaustible source of science fiction. ☺

MECANOSAPIENS

Storyline by Dan Eiler
Illustrated by Dan Biamonte

Reader Participation Series: Numan is the ultimate synthetic man, heir to a dead mankind's knowledge, created by ULTIMAC to find a new world for a "new" mankind. Send ideas for further adventures (1000 words or less) to NUMAN, Box 642, Scottsdale, AZ 85252. \$25 upon publication.



NUMAN

sweeps gull-like thru space, as if catching the solar winds with invisible wings. He parks himself in orbit around a likely planet, takes readings with his internal "sensors." Then spirals down to a one-point landing, on one toe like a ballerina.

The planet is lush, cool and green. Insects buzz around him, birds flutter and wheel above his head. In the distance, a volcano seems to send up a hazy wisp of smoke.

A virgin planet, thinks Numan, exulting in the new sensations with the wonder of a small child, which he still is, despite his wisdom and apparent age.

The "smoke" from the volcano spreads-

and becomes a fog-like mist, unnoticed by Numan because of his duties examining the new planet. The mist is too fine for his internal sensors to register. He becomes aware of the fog too late, as it dampens his synaptic circuits. As he passes out, he senses that the mist is a highly-evolved intelligence that has terra-formed this world eons ago into a Garden of Eden. Numan is an intruder; it has sensed his intentions to colonize this world with those of his kind.

Numan awakes in a musty, cob-webby chamber, walled with gargantuan stones and





LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

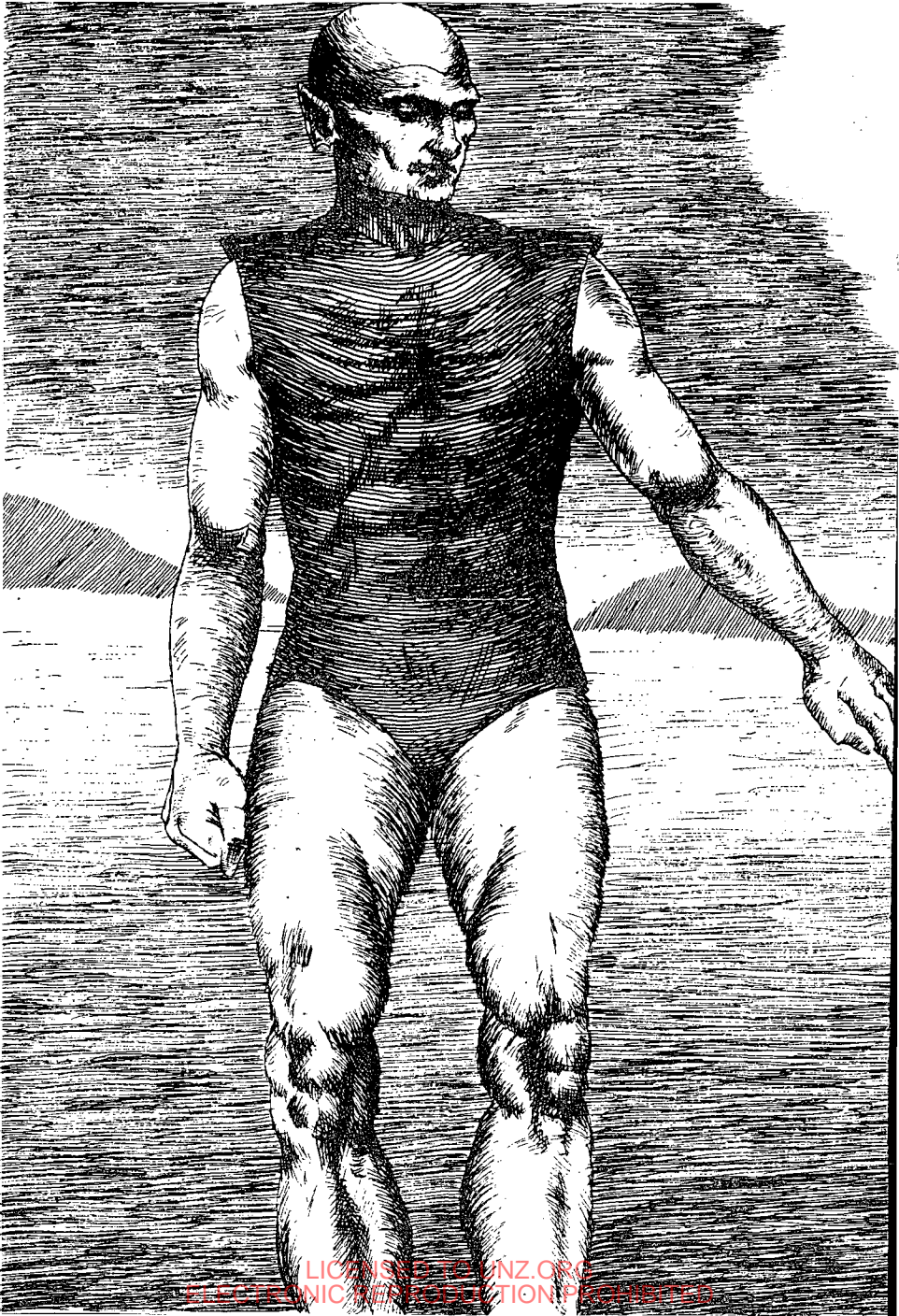
filled with rusting banks of machinery. Bulbous heads with Cyclopean eyes, tall, pale-skinned bodies that moved zombie-like amidst the consoles, turning dials and inspecting gauges with squid-like appendages that functioned beneath their armless trunks. A mechanized hum fills the air. Numan is paralyzed. The machines are draining him of all his knowledge, his very identity. His mind is now just the barest whisper in his skull. As he lies on the stone slab, thin wires drain his identity. Numan knows that if he is to continue his quest for a homeworld for the new human race, he must survive, and he must do something. But what?

Numan contacts Ultimac using his psionic powers. The consciousness of Ultimac takes over Numan's now-drained cranium, animates him to rip out the wires and zap the "Cyclopes" with bolts of psionic energy. Then he hooks up the wires once more and returns Numan's persona to him. Numan examines the Cyclopes; they are lifeless.

Probing his surroundings with his internal sensors, Numan discovers he is miles beneath the planet. Using his psionic abilities, he warps himself up to the surface. Here he confronts the mist creature.

It explains, that eons ago, it had the corporeal forms of the entire population of the planet. These beings forsook their bodies and their identities to become one creature, creating this paradise thru the will of their collective minds, and having guarded it since. When Numan arrived, the being feared he would take its planet by force. It had never confronted





a life-form like him before; it could only interpret his thought patterns imperfectly. So it animated android duplicates of its original forms and used the race's ancient machinery to drain his mind, thus protecting themselves from danger and preserving his essence for further study.

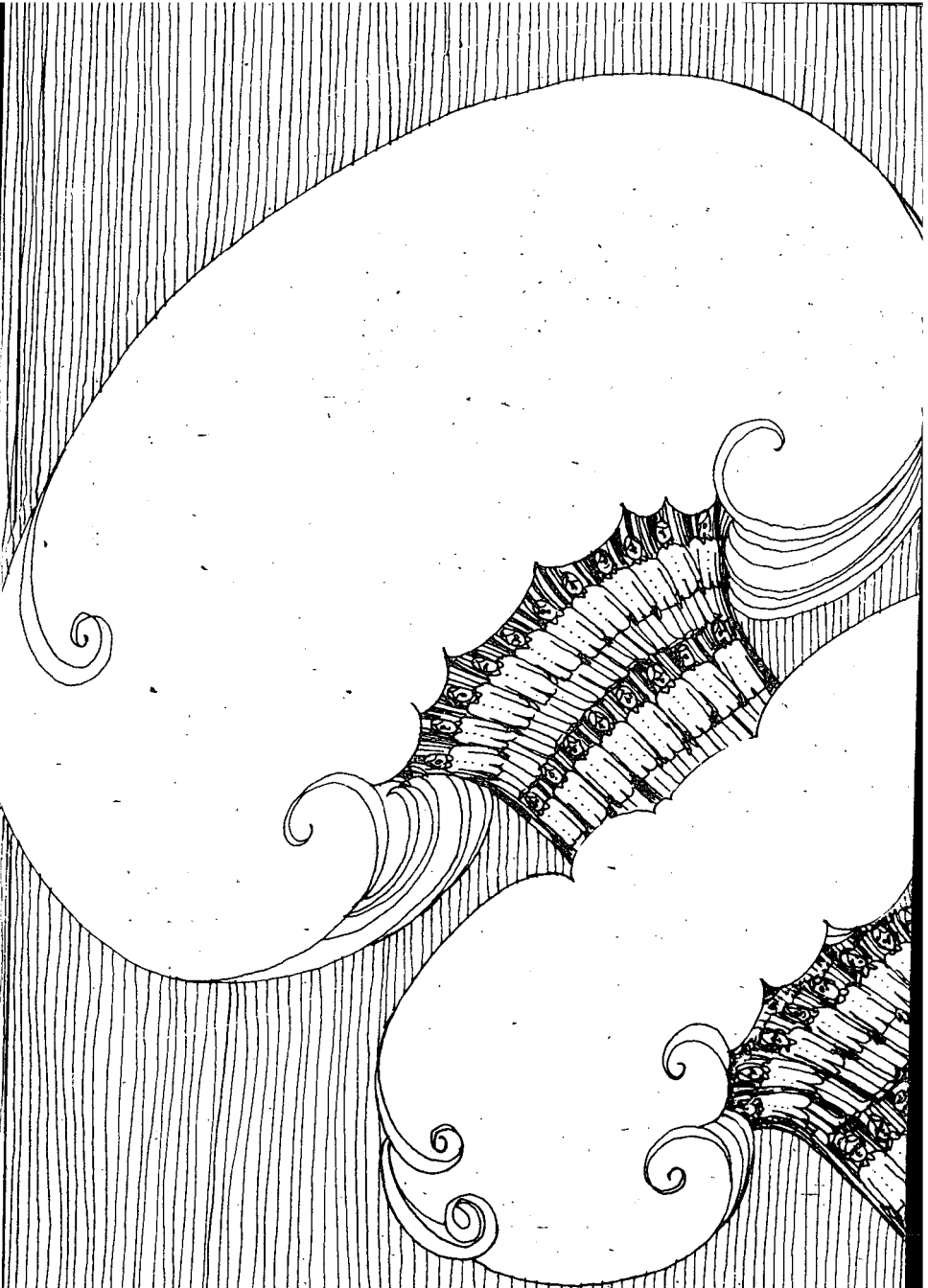
It did not believe it had did wrong. The identities of its composite parts had long since been lost in the melding of the common creature. It did not understand the concept of death.

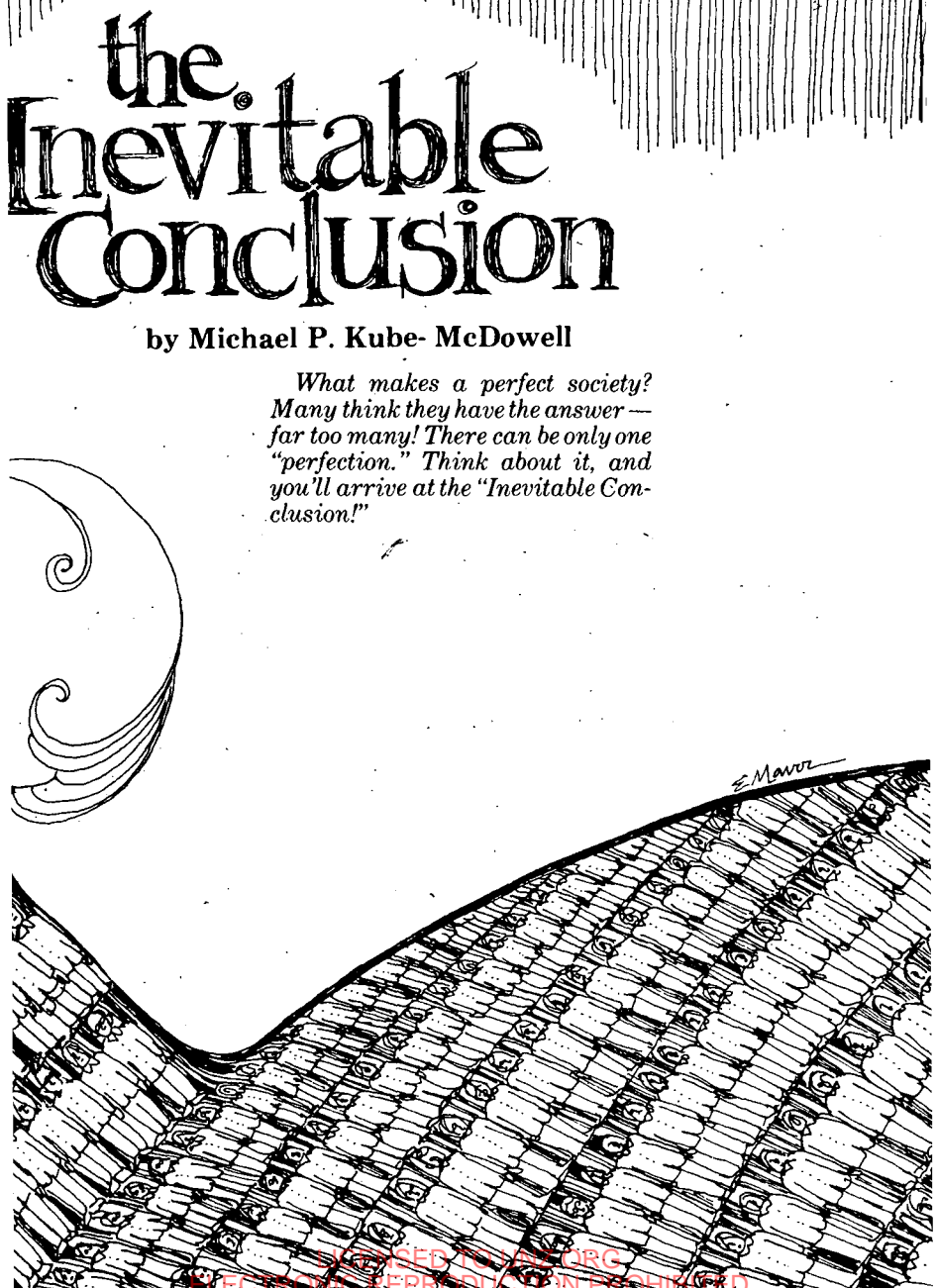
Numan assures the creature he will not destroy their paradise. He also warns it that he will leave a trace of his life essence to watch over the planet, and that a horrible vengeance will befall the being if ever it again recklessly threatens another sentient life form.

Numan then takes leave of the paradise planet to once more stride the stars. ●



LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED





the Inevitable Conclusion

by Michael P. Kube-McDowell

*What makes a perfect society?
Many think they have the answer —
far too many! There can be only one
“perfection.” Think about it, and
you’ll arrive at the “Inevitable Con-
clusion!”*

IN SUM, this survey team concurs with the original survey evaluation — that the Elders of Rena have, by their understanding and application of unique principles of social management, developed what must be described as a perfect social order.”

Dr. Thackery snorted and flipped the report onto his desk. “File it,” he said, and the sheaf of polyper was swallowed by a dark maw that yawned on his command and then swiftly disappeared.

Not since the telepaths on Campbell’s Planet had the Service had so much trouble licensing a new discovery. One survey team (admittedly an inexperienced one) returned from Rena with their judgement so badly corrupted they required a year’s retraining. This latest survey team had tendered their resignations along with their report — a report so muddy with praise and lacking of specifics that a rookie trainee would have been ashamed of it. But inexperience was no excuse this time — the two senior corpsmen leading the team had had seventeen planets experience between them.

“Elsie,” he said, regretting the inevitable conclusion.

“Yes, Doctor?” a disembodied voice answered.

“I’ll be going to Rena, Elsie. Please make the arrangements.”

SETTLED IN his small cabin, Dr. Thackery’s thoughts slipped briefly backward. There had been a tearful goodbye with his staff, most of whom would be dead or retired by the time he returned. The “magic holes” between the stars were still fiction. Oh, the Service engineers could punch a bastardized electromagnetic signal through the fabric of space (said ability giving interstellar travel most of its still-limited usefulness), but a ship was another matter. Thackery’s ship, the *Fireside*, though hyperlight, would bring him back in four months to a world forty years different — thus the final touching meeting and fifty-year-old Elsie’s flowing tears.

Taking leave of his housemate had been less memorable. Kari had followed him into the street, hair and clothes in disarray, alternately disparaging several generations of Thackerys and making embarrassing entreaties. Though it had been fifteen years since Thackery’s last field assignment, Kari should have known he’d eventually be needed again. A sharp slowdown in the discovery of populated planets had postponed the inevitable, but there were going to be times when there was no substitute for a man who had visited forty planets and lived parts of man’s last four hundred years.

Thackery's thoughts shifted perspective, to the future and Rena. Most of the reliable information was contained in the Contact report — a cool red sun, a somewhat dry and rocky planet settled in the still-enigmatic First Colonization an untold time ago. The exact date was unknown in Earth's records and obscured by mysticism in Rena's, but was certainly over two thousand years ago.

The Contact team, based on its orbiting surveys, had scored Rena as a 7 technologically and a 1.2 on the important Social-Ethical scale. The first ground survey confirmed the 7, but raised the S-E to a 10+, and in doing so automatically obligated a second visit. The last team carded a 6.8 and, annoyingly, a second 10+.

Thackery had no trouble with the 6.8, but a 10+ meant a level unmeasurable because it exceeded that of the yardstick, Earth. The Service had handed out three 10+ scores on the Technology scale, but never in two hundred planets had there been even the suggestion of a 10+ on the Social-Ethical matrix: How could there be? Earth embodied all of the highest social ideals its thinkers had ever conceived. Its solar-energy satellites and fusion plants provided the power for Earth's thriving, thronging cities and had opened the great mines on Mars. Full planned employment, free psychiatric help, wonderful government hospitals, guaranteed equality, parent training and free adult education greased the social gears. Cheap travel and an all-reaching communications net homogenized the world that First Contact flight had brought together. Earth was a world humming with new life and vitality — a sparkling example of the peaceful co-existence possible when competition is no longer king. What could Rena offer to add to that?

PLANETFALL WAS uneventful. Fireside touched down in a somewhat spartan spaceport near Braun, the capital city of the planet's largest province. As Thackery entered the terminal, a young courier with rigid features stepped towards him.

"Elder Bright Adams extends the open hand of Rena to you, Dr. Thackery," the courier recited. "I am Brace, your driver and escort. If you will wait here, I will see about your cargo." Without waiting for a reply, Brace pivoted smartly and headed towards a clerk's station.

As he did so, Thackery studied him with a casual and practiced eye. The Renans were human, of course, being yet another splinter of the mighty First Colonization spear Earth had hurled outward in those dim periods of the past. Brace was a rangy, athletic

man of graceful movement, older than Thackery had first thought. His hairstyle was severe, and his clothing typified a kind of rude functionality, with unconcealed closures and visible seams. The language Brace spoke probably varied less from Standard English of two millenia ago than Thackery's own tongue did.

Brace returned shortly and led Thackery to a wheeled ground-car. As the vehicle lurched and pitched its way along the spaceport drive, Thackery spotted his gear being loaded into a larger wheeled vehicle — a “truck” — and was thankful he had taken extra precautions when packing.

“How far are we going?” Thackery asked.

“Five miles,” Brace replied crisply. Thackery, glad he had reviewed the survey reports before landing, translated that into eight kilometers and was content. The mile, a primitive unit reportedly based on the length of God's shadow, held no meaning for Thackery at all.

The land visible from the road was being extensively farmed, but there were large areas undeveloped in any way. Thackery also noted the carcasses of several small animals lying in various states of mutilation on the pavements of this ground level roadway. Was it by ethical choice or technical lack that no sensor field repelled animate life? Thackery made a mental note to find out, and turned his attentions to the low, sprawling city now visible in the horizon's haze.

IF THACKERY had expected Elder Bright Adams to be either old or stately, he would have been disappointed. “Elder” was either an honorific title or had changed meaning since the race had split, for Elder Adams turned out to a wiry, inquisitive man of thirty.

“Truly a pleasure to have you visit us, Doctor,” Adams said effusively. “Contact with your people has been an eye-opener to those of us privileged to know of it.”

“No more so than you with us,” Thackery said truthfully.

“I'm told my predecessor was surprised by the request for your visit . . . and the twenty years since then have whetted our curiosity. A visit from you is not usual, is it? At least that is what your survey team gave us to believe.”

“There were some — irregularities,” Thackery conceded.

Adams pounced on his words. “The matter of the ‘perfect’ society, I'll wager.”

Thackery was startled and disturbed. “You know the substance of the surveys, then?”

"Oh, yes. Your men shared their views quite freely, and much to our interest. My predecessor retained them as advisors up until the time of their deaths. The appellation troubles you, then?"

"A great deal. May I ask how you received it?"

"Oh — we quite agree," his host said ambiguously.

THE BLOOD-RED disc of Rena's sun was still low in the sky when Thackery was delivered to the warehouse-like building his equipment had been stored in. It seemed to be part of a large complex of related buildings, though tucked away in a little-used part. Thackery had barely begun unpacking when Elder Bright Adams' voice boomed through the building's emptiness.

"Good sun!" Adams said cheerfully, striding across the rough concrete floor. "I came by to see that you were being taken care of."

"Everything is quite suitable, thank you," Thackery said. He was kneeling over a white rectangular mass that was slowly changing shape and smoking.

"You won't be needing any other transportation today — what ever are you doing?"

"Unpacking." Thackery opened a small vial, and the white mass began to smoke furiously. Here and there a bit of metal began to show beneath the dissolving material (a Service creation for transporting sensitive equipment — available commercially as Pac-King). "As for your first question, the only transport I'll need will be to and from this building. Unless something unforeseen happens, I'll do all my work from here."

"Fascinating! How?"

The Observer unit was completely unpacked now, and as a partial answer Thackery activated it. Raising itself up off the floor, it tentatively hovered at waist-level. A globular mass of metal some 50 cm. in diameter, it was studded with sensor openings and photo-cells.

"I have three of these units," Thackery said, moving to the desk-top controller. "They're self-powered, have automatic guidance subject to my control here, and contain visual and aural sensors. They are, in effect, my mobile eyes and ears. Your people will never see them, since they are self-concealing as well." Thackery touched a microswitch, and the Observer abruptly faded from sight.

"It's still there?"

"Yes. It's merely projecting on this side what it sees on the other side."

"A bit more sophisticated than what your team had at its disposal."

"And yet they have their drawbacks. They can be detected by mass-sensors, must use doors to enter buildings, and are, though quiet, not silent. But they will speed my work."

"Are you in a hurry to leave us?"

"Not particularly. But I find as I grow older, I am more reluctant to spend time and energy dragging my body around simply because my mind wishes to go somewhere else."

"Your trip to Rena must have been tedious, then."

"To me it was only a seven-day span."

"Yet you've been on your way twenty years."

"It's a matter of perspective — the same event seen from two different places."

Elder Adams' nose crinkled with confusion, but did not pursue it. "We are not a space-going people," Adams said, as if that explained it. "Not now, in any case. Good luck with your work, Dr. Thackery. I hope you find answers to your questions about our peoples."

"Yes. Elder Adams, for reasons of objectivity I would like to limit my contact with your people as much as possible until my work is done."

"As you wish. You will share your point of view with me before leaving?"

"I will," Thackery said, beginning to treat a second Observer with solvent.

"I will look forward to it," Adams said, and left.

THE SILVER Observers, programmed with geographical data from the Renan libraries, began their travels before the week was out, and from the start Thackery found little to like about his temporary home. In the city of Braun, where he began his observations, Thackery spent several hours exploring a hill-side slum. In one crumbling house, a six-month-old girl lay crying in a bed, smeared with her own excrement, while downstairs her two older brothers hunted a rat-sized lizard with a pellet gun. Broken pipes had enabled the basement to be overtaken by a foot of human sewage, a breeding place for the lizard and other assorted vermin.

Many of the structures were abandoned, and most of the rest had enough broken windows or missing doors to permit the Observers free movement. Thackery saw eighteen people living in one five-room house, having just moved there from the adjacent

structure. The move had occurred without any encumbering legalities — the old home had simply become, in their words, “too messy”.

The slum pulsed with malevolence — little simple theft, but a sordid circus of assault. The blind depravity of the area was shocking, but less shocking than the neglect that had permitted it to flourish. Moreover, there seemed to be a sharp line — almost a barrier — between the slum and the rest of the city.

When he turned his Observers out into the rest of the planet, Thackery quickly discovered that the slums in Braun were not unique. In fact, he discovered several others scattered over Rena’s one supercontinent that made the slums in Braun seem luxurious by comparison. These wretched backwaters contained an admittedly small percentage of the Renan population, but the extent of the destitution rivaled anything in Thackery’s experience.

On the eastern coast, thousands of kilometers away, a bloody internecine war was raging between two provinces. It apparently centered on the possession of a particularly productive strip of coastal plain lying on their shared border. The war was being fought almost exclusively hand-to-hand, with little mechanized equipment. The Observer’s sensors told of thousands of skeletons lying under the thick carpet of green. That, and the earthwork fortifications were the only clues that a war was underway, as there was none of the open destruction Thackery had grown to associate with a civilized war. There was only the killing of human beings.

His random survey complete, Thackery turned to a detailed checklist. The Renan’s sophisticated immunization program contrasted wildly with a total lack of orthopedic care. Business loans were available — public assistance was not. Cripples were systematically discriminated against in hiring and by inaccessible buildings. Children were expected to select their own future careers and seek out their own employment. There were no charity funds or service organizations — indeed, the word “charity” was a null in the Renan English. Finally, almost by accident, Thackery learned that Bright Adams had come to power through assassination.



Although he was not concerned with technology, Thackery did note that the Renans were capable of producing many devices but did not. For instance, none of the multi-story buildings had elevators, lifts or escalators. The downtown area lacked moving sidewalks. Bank clerks performed their own calculations. It seemed as if the Renans perversely chose the least efficient of the various ways to achieve an end.

The silver Observers crossed and recrossed the globe, silent and all-seeing, and Thackery spent a thousand hours with his monitor and recorders. He studied the rôle of women, the extent of racial prejudice, the nature of class interactions, the workings of social services, the editorial views of communications networks, the citizen-government interface, and the relations between provinces. His roving eyes opened the doors where decisions were made and where they were cursed, shadowed farmers and freemen. Before long came a day when Thackery realized he had only two questions left. One was unanswerable, because the members of the last survey team were quietly paying back the soil for its sustenance. The answer to the other question could only come from the lips of Elder Bright Adams.

"YOUR WORK is finished?" Elder Adams asked eagerly, indicating with a wave of his hand that Thackery should sit.

"It is."

"Although you try to make your face unreadable, I would guess that you have been led to a different conclusion than the men who preceded you."

"You are correct," Thackery said, reaching for his pocket-corder, then changing his mind and stopping.

"I would love to hear your views." The younger man was a model of childlike anticipation.

Thackery met his gaze. "My results are complex, of course. But for convenience in cataloguing we do reduce it all —"

"I know all that," Adams interjected. "Give me the numbers."

"0.8 — the lowest I've ever given."

"You were shocked by what you saw."

"Not by what I saw — by what I failed to see. Slums, unequal distribution of resources, bellicosity and prejudice occur on more planets than they don't. Though they make me uncomfortable, I'm afraid I've been at this too long to be shocked by them. What dismayed me is that I was unable to find evidence that you are trying to mitigate the effect of those vicious social forces. I cannot go home without asking you to show me what I missed, or should my observations be correct, without asking you why."

For once Adams considered his answer before speaking. "Your results do not come as a surprise to us. We have, of course, been watching you as well. When I saw the inadequacy of your methods, I knew that they would lead you to these conclusions. Oh, you were most systematic and are obviously a trained observer. You missed nothing — yet in a sense, you have missed everything. Forgive me — what you have done is the anthropological equivalent of having sex while wearing a clear plastic suit. You can see everything, but feel nothing. By staying in that tiny building, you have failed to plumb what it feels like to be a Renan. Your other teams, who were out among us, came to understand. Let me ask you this — in the course of your observations, what did you learn of our Kiri — our religion, for want of a better word?"

"I have catalogued it as a nature worship, based on what we would call a principle of *laissez-faire*. But you must realize, Earth has not been a religious planet for some time, and I may have . . ."

"I know that and much more about your planet," Adams said softly. "And how little you know of us! In failing to consider seriously our religion, you have missed the point. For in the Kiri can be found the heart and soul of the Renan way of life.

"The Kiri is both more than a religion and less than a science. It bears a close resemblance in many ways to what you would call population ecology, a science Earth might do well to reacquaint itself with. Do you know that over three-quarters of Terran natives require vision aids to carry out their normal life? That two-thirds need false teeth at some point in their life? That the average Terran would be considered overweight by the standards of only twenty years ago?"

"How do *you* know?"

"We asked," Adams said simply. "You think of yourselves as a thriving race. To us you seem a frail and slothful aggregation of coddled genetic misfits."

Thackery felt he should protest, but the reply died half-formed on his tongue as Adams went on.

"The conclusion is obvious. Here are two shoots of the same species. One shoot is healthy. The other, yours, is desperately sick. Where we have used competition to sharpen us, you have eliminated it and are paying the price. Certainly we have wars, and all the other 'horrors' you judged us so harshly for. An ice storm can strip massive branches and strike down stately trees. An observer the next day bemoans the loss. Yet next summer, in the wake of the storm, it becomes clear that only the weak have

fallen, leaving healthier trees and a thriving forest."

"So by that principle you kill babies born with defects . . ."

"No, no. We are not killers. Each baby receives a fair and equal chance. Nature and bad genes kill babies, and the bad genes die with them. All we have done, Doctor, is accept for ourselves the culling we observed to be good in the animal world. We have dropped the ecological double standard. No matter how great man's works may seem, he is only an animal. When he forgets that, his works are doomed to fail and fall. We have not lowered our standards. We have brought them in line with reality.

"Let me try and answer your earlier question, Doctor, by telling you of the Kiri. It's a complex study, and we're always learning more. But there are three overriding principles that underline everything we believe. Let me enumerate them for you in language you will understand.

"First Law: What is, is.

"Second Law: Every man has a right to live — and all the responsibility that goes along with that right.

"Third Law: When a man lets a machine or another man do something for him, he loses the ability to do it himself — and diminishes his stature as a man.

"You see us as lacking compassion for the individual. Can you see that instead, we are showing a greater compassion by protecting the future of the race?"

"No," Thackery said flatly. "I will never see that. What's more, I will never know how my men could describe this as a perfect society. For the first time in all my years of work, I wish I had in my hands the power to reshape a world."

Adams crossed and uncrossed the fingers of one hand, his face tolerant. "I understand," he said finally. "You will be leaving us, then?"

"Tomorrow, if possible." Thackery was unable to avoid clipping his words, though the Elder seemed not to notice.

"I'll see that a car is made available for you," Adams said, and the interview was over.

THACKERY, DRESSING, paused in mid-motion and stared in the mirror. The face that stared back was still angry and, for the first time, old. Over four hundred years had passed since his mother had nodded assent to his father. By design or chance he was a special man — and not one that should have to endure the tongue-lashing of a pompous and ignorant alien so much his junior. He stopped short as he thought the pejorative. The anger in him last night and this morning, the emotional content of his

thoughts — Rena had at last affected him, albeit differently. It was time to go home.

It gave Thackery satisfaction to close the door to his quarters, knowing it would be the last time. After making certain his baggage had been picked up, he made his way outside where the car was waiting, as promised — but with a surprise passenger. In the far corner of the back seat was Elder Bright Adams. Thackery hesitated.

“Good sun,” Adams said, leaning towards him. “I thought I would accompany you to the spaceport.”

Thackery nodded stiffly and climbed in.

“No doubt you found me hard to take yesterday,” Adams said as the car lurched forward. “I came partly to apologize — not for what I said, for we still believe it, every word. But I did not need to lecture you.”

“Apology accepted,” Thackery said. “May I have equal time?”

“Of course.”

“You say that you are accepting man as he is. What of the man of emotion, the man of love, the man of sympathy and compassion? You’ve not permitted him to live. No race that ignores the suffering of its kin can rise very far. There are sins of omission as well as commission. When you have the power to save someone’s life, there’s a moral imperative at work that should compel your action.”

“If you refer to our policies toward certain illnesses, I fear you oversimplify. More than an individual life is involved. As to your moral imperative — Kant, isn’t it? — I’m told Earth psychology once theorized that all charity was an act of selfishness.”

The last remark — or was it Adams’ manner? — infuriated Thackery. “Earth! What do you know of it but what you learned from the apparently poor examples we sent you? You seem to think you can discuss it as an expert!”

Adams hesitated, but there was no way to soften the effect of what he had to say. “Our survey team landed on Earth a full ten years ago. It has been a most exciting study for us.”

“Your survey team?”

“It was not upsetting to us to watch a race earnestly trying to raise its level of existence by dragging down its very best. It seemed as though you didn’t realize it is the drive and work of the top two percent of a society that pulls the rest of it upward. But Earth has legitimized the claims of the weak on the strong. Your visit has cleared that up — you do not realize what you are doing. And about the label that concerns you so much —”

Thackery’s “Yes” was a small noise.

"The meaning of the word 'perfect' has not changed. A thing perfect is carried through to completion in every detail — in a state proper to a thing when completed — lacking in no respect — faultless. You as an outsider, see fault. We do not. It is a question not of substance but of perspective.

"When you study a population of elk or rall-deer, you examine the health of the group, its food supply, its competitors for resources, its role respective to other organisms — in short, its niche. You do not ask the elk what they are doing to provide for crippled animals or deposed male leaders.

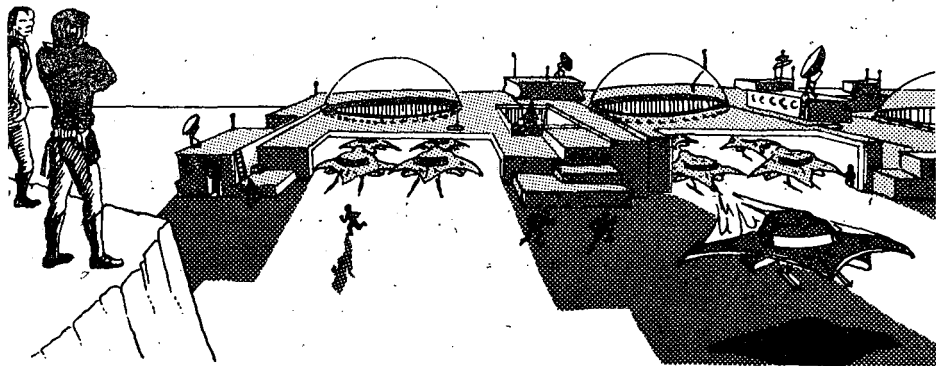
"Moreover, we have a technique that you have not tried to refine — the ability to predict, on the basis of just such a study, the future of that population in detail. There is, after all, one essential service a society must provide its citizens — continuity. From our self-analysis, we know we are healthy. There is no possible future that our Kiri has not prepared us to deal with. We look into our future and are confident — and that permits us to live in the present, and be happy.

"Our prognosis for your people is much less bright. If nothing happens to change some crucial elements of your pattern, before long the deadweight of your many inferior members will prove to be too much."

"I'm scarcely surprised that a 'technique' developed by you treats yourselves kindly and sees us in a dimmer light," Thackery retorted, rallying.

"Nevertheless, we are correct. If you wish to know more, I could contact one of the technicians of the Kirir. I am only a layman in these matters."

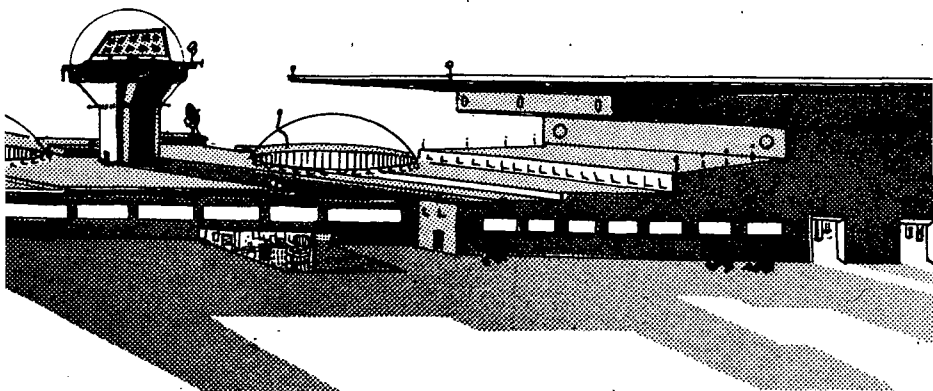
"Thank you, no."



"I thought that might be your answer. Yet, forgive me if I press the point a moment longer. We believe that we are in a state proper to man — in perfect tune with our nature. Our dedication to those principles is consistent — they are perfectly applied. Lastly, as a group, because of our wonderful diversity, we are perfectly complete. So, as you see, the word is not necessarily misapplied. However, if you are still troubled — consider that the men who preceded you here were younger. Younger men are more willing to accept the idea of a world with challenges."

The conversation did not end, but disintegrated at this point. Thackery concentrated on the weave and stitching of the front bench cover. Adams sighed almost imperceptibly and settled back into a restful position. No more than a long minute had passed, however, when Thackery heard Adams straighten up and say, "Ah — we are here."

Reaching immediately for the door release, Thackery fled the smothering presence of the younger man. His relief was short-lived. Once glance told him that the spaceport had changed, but he swung his gaze back and forth almost wildly, disbelieving. The change was nearly total. The neat, modest terminal building now was only a small part of a sprawling complex of buildings. Small construction vehicles scurried busily in the far parts of the port, their work not complete. When Thackery had landed, there had been only two touch pads, and that had seemed one too many. Now, visible above the roofline were the noses of at least a dozen large spacecraft bearing the Renan emblem. Even as he struggled with that fact, one of the slender ships hoisted itself skyward, trailing a streak of grey vapor. Thackery followed it across the muddy coral sky and sensed, rather than saw, Adams at his elbow.



"What sort of deception . . ."

"No deception," Adams said quickly.

"All this — in four months time. Why?" Thackery asked with a note of awe. "You said you were not a space-going people."

"We had not had a reason to be," Adams said simply.

"You came here today to show me this. Why?"

"So that you would know that we are not totally without compassion," Elder Bright Adams said softly. "Earth can never be saved if no one speaks the truth to it. Those ships carry the missionaries of Rena and the Kiri."

The ground seemed unfirm beneath Thackery. "You mean to make us over — in your image?"

"If it is within our power."

Thackery drew away from Adams as though from a diseased man. "It won't be. I know my people."

"Do you? Our survey team would say otherwise. A large segment of the population seem to feel they have been held back in the name of equality — and they have. Our people will do no more than bring them together. Your discontents will do the rest themselves, as they have through history."

Thackery's face darkened suddenly, if that were still possible. "You're sharing your plan so freely — am I to stay here?"

"Not at all. Fireside will lift on schedule."

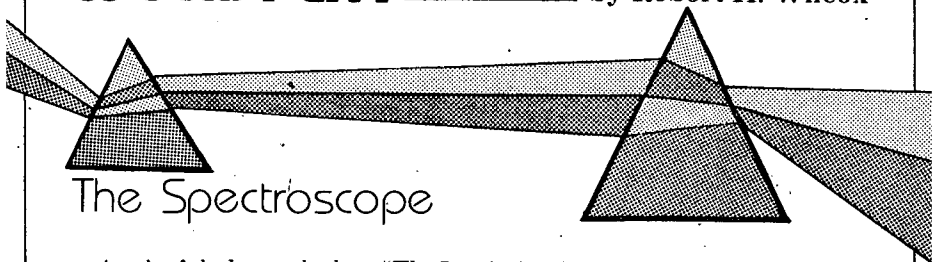
"Then why tell me? You think you know me. You must know I'll fight you in every way possible." With a muted rumbling, a second Renan ship lifted off from beyond the buildings. "You're wrong about us. You'll find that out!" Thackery began backing towards the terminal entrance, and his voice rose in pitch and fervor. "You'll see what we're made of! We'll never accept you. The whole of earth will unite against you and drive you back to this infestation you call home!" His eyes ablaze, Thackery seemed for a moment ten years younger.

Adams remained annoyingly unruffled. "You cannot drive an idea away. By the time you reach Earth, it will be your own people you are at odds with."

"Then we'll have to fight *them*. You'll find we're not so easily controlled, Adams!" With that Thackery turned and disappeared with surprising speed into the terminal.

Elder Bright Adams permitted himself a small smile.

"Good," he said quietly. "We're counting on it. It would be a shorter convalescence with our guidance, but a war is a good beginning." ●



The Spectroscope

A colorful, deeper look at "The Inevitable Conclusion," by our editorial consultant, Robert H. Wilcox. Readers and writers alike will enjoy this lively analysis of Michael Kube-McDowell's new piece of fiction.

WHAT IS a thought? With all our technological skill we should be able to answer this simple question. But we can't. No one has ever seen a thought — and in fact we aren't entirely sure about the process that makes thinking possible. One thing we do know, however: thinking is hard work. No matter how much we try, we have difficulty in concentrating on a *single* idea. Our brains seem to be swirling with many forces, emotions, feelings, and impressions, so that we find it almost impossible to sort them all out.

Yet, somehow, this is what we manage to do if we want to be productive, to get something done. And this is certainly what a writer of science fiction must be able to do if he intends to show us his thoughts. His brain, like ours, is a storehouse of many ideas and possibilities. An especially creative writer, in fact, could be almost blinded by the blaze of images and impressions available to him when putting together a story. But he must somehow control himself if what he writes is to come across in print.

A good comparison occurs in the case of light. If we take white light and run it through a prism, what comes out is a spectrum — a whole rainbow of colors. An author has the same experience when he passes a story idea through the "prism" of his imagination. The colors are gorgeous, but they shoot off in all directions. What he must find is a control, like a laser, to concentrate the beam of his thoughts so that the reader can tap into a coherent wave length, so that he can understand and enjoy what the writer has thought.

This makes a neat analogy for us to draw with the stories in *Amazing*. Let's assume the writers have filtered out a single color of significance from the kaleidoscope of imagination. They have passed it through the laser of a thesis or theme which gives the

story a track to travel on, and we can ride along with understanding and pleasure in the journey. Perhaps this sounds too mechanical? Not really. It actually adds fun and excitement to the reading process. We match wits with the writer, as a matter of fact, because we try to find out why he designed his story with this or that particular color. To do this, we have to reverse the process and run his words back through the prism of our own minds to find the colors he began with.

Maybe you never thought that thoughts have color? It's pretty hard to think about Spring in any shade but green. The penny we trade for one is copper-colored. And all of us have black thoughts in times of despair. Color is life, and the vitality of any science fiction yarn leaps from its wave length in the writer's imagination. To get the thrill and pulse beat which make good stories worth the reading, we have to filter out the primary colors that communicate the message.

Let's take an example from the current issue of *Amazing* and see if we can identify some colors. Preceding this is a good possibility, "An Inevitable Conclusion." There appears the word "survey," in the report our hero has been studying. "Survey" is the laser term which the author selected from the rainbow available, and you and I understand what he means by it — a broad, sweeping examination. Good enough, but there's more than a word here. The examination is by eye, a very faulty instrument. We see upside-down as infants, and we learn to "see" later only through a psychological twist. Some of those twists may distort what we see in different ways. All of this "color" to the story is suggested by this opening scene, for the report bears the twist of the survey team. And, as we read along through the story, we note that Thackery adds a few distortions of his own.

Distortion is, in fact, what a good science fiction writer wants to achieve. He's not writing a report, but an imaginative tale which depends heavily upon irregularities and unexpected elements for effect. The distortions — colors — of white light are pleasing in their effect. Light and words mean more than meets the eye, and it takes great skill and practice before we can get the most out of either. So be prepared for the certainty that "survey" may mean examination — or auction — or a view — or oversight.

Take another instance from "An Inevitable Conclusion." Elders are thought to be wise, but Thackery believed them so foolish that he was prepared to abandon familiar surroundings and give up four months or forty years — whichever came first — to disprove the survey results. How could a "backward" civilization, established only a couple of thousand years before, excel Earth on the Social-Ethical scale? A benevolent government and

superb technology had created the ideal existence for the citizens of Earth. All men had at last been created equal. How could Rena top that?

And all he found on that distant world confirmed his convictions: signs of poverty and squalor, rampant crime, people living literally in sewers, bloody warfare. Earth had long since shattered these primitive shackles. The survey had lied, and Thackery's journey was vindicated.

But we find that his judgement is colored by perspective. The only freedom and hope for man lies in his choices. If there are no longer comparisons in standards and goals, if competition and change do not spur man to select alternatives — then what appears to be a superior civilization may be a tomb with a beautiful hue.

So, again, color makes a huge difference in interpretation. When the shade which one is accustomed to is lacking, another world seems backward and undeveloped. Color or words, or ambiguity of meaning, is an important force in this story. Without the possibility of shifting meanings, the conclusion reached by the reader might be the same as Thackery's. But we can see flaws in his Eden, and a serpent from light years away is preparing new temptations for Earth's enameled populace.

There is much more than this to the story, of course. If we are willing, we can delight in all sorts of colors throughout the tale — colors of irony, of satire, of *wordplay*. It's a short hop, or instance, to *Thackeray* from *Thackery*. Anyone who has read *Vanity Fair* remembers how Thackeray satirized the so-called upper classes. And don't forget that Makepeace was his middle name. It also seems amusing that the ship should be named *Fireside* when it sails so far into space. The planet Rena comes in for a change of tint, too. The sense of that name is associated with human organs of excretion, and there is plenty of evidence of that strewn about through the story. Also, other names have good possibilities: Brace with his vigor, and Adams with his revolutionary potential are examples. And how about Elsie — not a fountain of milk but of tears.

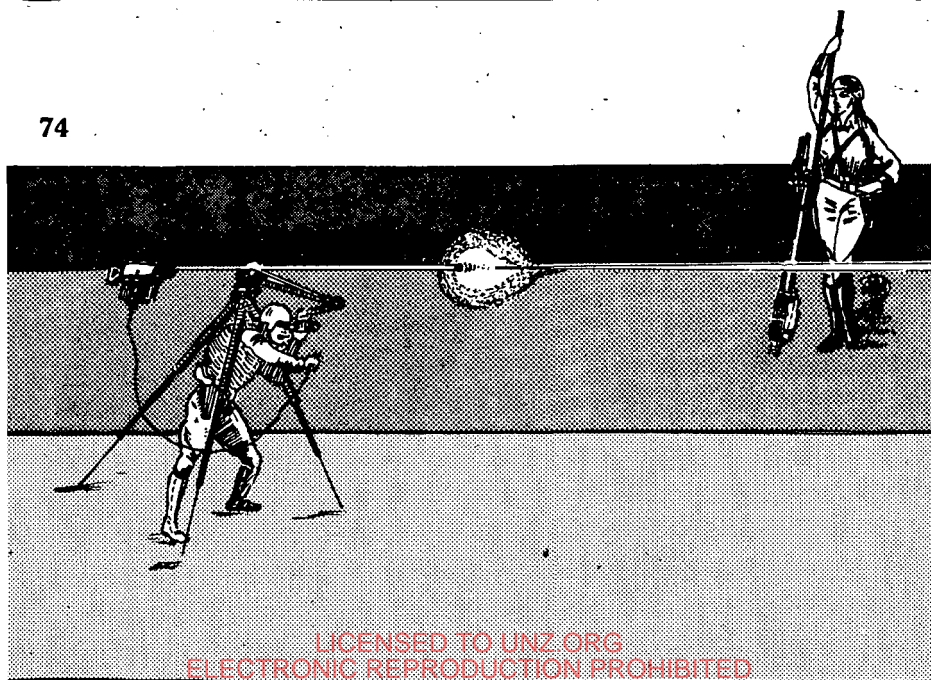
A final color can be seen in setting, one of the most important ingredients of a science fiction story. Setting, the place where people and action are found, contributes an enormous splash of pigment to "An Inevitable Conclusion." As the account opens we see an automatic office, with a voice-operated filing tube swallowing a sheaf of polyper — marvelous term. We see a culture which has mastered its environment, inside and out, and which can journey through space at small cost to the traveler. Contrast this with the setting of Rena. A blood-red sun glowers upon ram-

shackle structures. The spaceport is spartan; the capital city is called Braun (brown). Vehicles and roads are primitive. As Thackery pursues his examination, depressing evidence concerning the backward culture rapidly piles up.

What a smashing discovery, then, to realize the superiority of Rena's way of doing things — if the reader chooses to accept that color. At the end of the story, without apparent technological means, the tiny spaceport has become a sprawling complex of buildings and a dozen spacecraft are poised to streak skyward. It appears that Earth now must be saved from its own destruction through discontent with the status quo, which is to be spread by missionaries from Rena.

Much of this transformation is made believable through the setting: an apparent golden one stacked against the dingy scape of Rena. It is this contrast which shakes the reader's perspective and imparts terrific dramatic punch to the relationship. And Adams is confident that his aims will be accomplished, for a war will transform the paradise of Earth into the shambles necessary for its own salvation.

So we see that color is vital to life and to our story, and if the shades occasionally shift and flicker they do so to reveal to us the charm and appeal which are often overlooked because they lie in shadow. ☉





The First BUCK ROGERS *Story* *Ever Published*



It was in these pages that *Buck Rogers* was born. As Anthony Rogers, he appeared in the August, 1928 issue of *Amazing Stories*. The story that introduced him was called, "Armageddon — 2419 A.D." and was written by Philip Frances Nowlan. Several months later, in our March, 1929 issue, a sequel appeared under the title, "The Air Lords of Han." Both stories were illustrated by our immortal artist, Frank R. Paul.

Now, Universal Pictures plans to release a multi-million-dollar movie with *Buck* as the leading character.

Buck Rogers has always held a special magic for space-minded youngsters, and *Time Magazine* reported that astronauts John Glenn, David R. Scott and Neil Armstrong were among *Buck's* fans when they were kids.

This early spaceman has succeeded in firing imaginations by offering science as the key to unlocking the secret doors of space.

Because the year 1979 marks *Buck Rogers's* 50th birthday, we are honoring his arrival on the SF scene with a reprint of the foreword to Philip Nowlan's classic tale, "Armageddon — 2419 A.D.," in which the stage is set for the story.

Many of our younger readers, who may soon be introduced to *Buck Rogers* on film, may not have known about his "roots" in *Amazing Stories*. And, perhaps others will also be pleasantly surprised.

ELSEWHERE I have set down, for whatever interest they may have in this, the 25th Century, my personal recollections of the 20th Century.

Now it occurs to me that my memoirs of the 25th Century may have an equal interest 500 years from now—particularly in view of that unique perspective from which I have seen the 25th Century, entering it as I did, in one leap across a gap of 492 years.

This statement requires elucidation. There are still many in the world who are not familiar with my unique experience. Five centuries from now there may be many more, especially if civilization is fated to endure any worse convulsions than those which have occurred between 1975 A.D. and the present time.

I should state therefore that I, Anthony Rogers, am, so far as I know, the only man alive whose normal span of eighty-one years of life has been spread over a period of 573 years. To be precise, I lived the first twenty-nine years of my life between 1898 and 1927; the other fifty-two since 2419. The gap between these two, a period of nearly five hundred years, I spent in a state of suspended animation, free from the ravages of katabolic processes, and without any apparent effect on my physical or mental faculties.

When I began my long sleep, man had just begun his real conquest of the air in a sudden series of trans-oceanic flights in airplanes driven by internal combustion motors. He had barely begun to speculate on the possibilities of harnessing sub-atomic forces; and had made no further practical penetration into the field of ethereal pulsations than the primitive radio and television of that day. The United States of America was the most powerful nation in the world, its political, financial, industrial and scientific influence being supreme; and in the arts also it was rapidly climbing into leadership.

I awoke to find the America I knew a total wreck—to find Americans a hunted race in their own land, hiding in the dense forests that covered the shattered and leveled ruins of their once magnificent cities, desperately preserving, and struggling to develop in their secret retreats, the remnants of their culture and science—and the undying flame of their sturdy independence.

World domination was in the hands of Mongolians and the center of world power lay in inland China, with Americans one of the few races of mankind unsubdued—and it must be admitted in fairness to the truth, not worth the trouble of subduing in the eyes of the Hans Airlords who ruled North America as titular tributaries of the Most Magnificent.

For they needed not the forests in which the Americans lived,

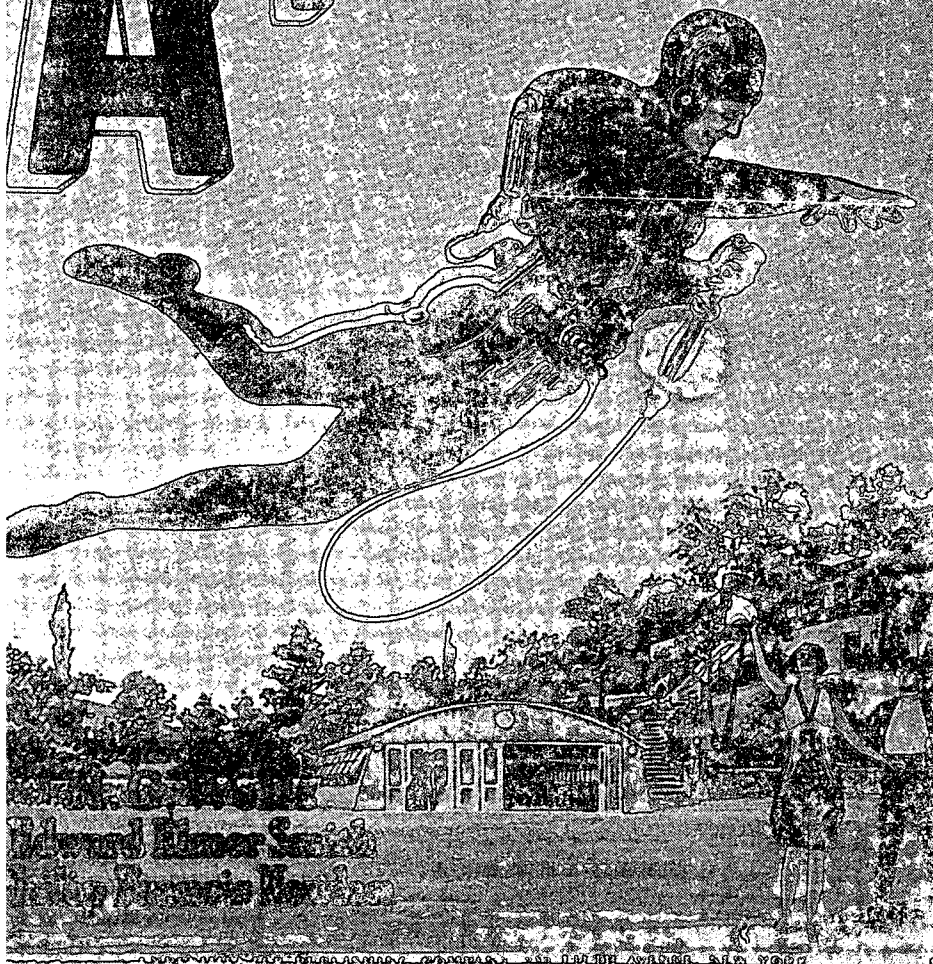
August

QWERYQ

25 Cents

AMAZING STORIES

HUGO GERNSBACK
EDITOR



the August, 1928 issue of *Amazing Stories*.

licensed to UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

nor the resources of the vast territories these forests covered. With the perfection to which they had reduced the synthetic production of necessities and luxuries, their remarkable development of scientific processes and mechanical accomplishment of work, they had no economic need for the forests, and no economic desire for the enslaved labor of an unruly race.

They had all they needed for their magnificently luxurious and degraded scheme of civilization within the walls of the fifteen cities of sparkling glass they had flung skyward on the sites of ancient American centers, into the bowels of the earth underneath them, and with relatively small surrounding areas of agriculture.

Complete domination of the air rendered communication between these centers a matter of ease and safety. Occasional destructive raids on the waste lands were considered all that was necessary to keep the "wild" Americans on the run within the shelter of their forests, and prevent their becoming a menace to the Han civilization.

But nearly three hundred years of easily maintained security, the last century of which had been nearly sterile in scientific, social and economic progress, had softened and devitalized the Hans.

It had likewise developed, beneath the protecting foliage of the forest, the growth of a vigorous new American civilization, remarkable in the mobility and flexibility of its organization, in its conquest of almost insuperable obstacles, in the development and guarding of its industrial and scientific resources, all in anticipation of that "Day of Hope" to which it had been looking forward for generations, when it would be strong enough to burst from the green chrysalis of the forests, soar into the upper air lanes and destroy the yellow incubus.

At the time I awoke, the "Day of Hope" was almost at hand. I shall not attempt to set forth a detailed history of the Second War of Independence, for that has been recorded already by better historians than I am. Instead I shall confine myself largely to the part I was fortunate enough to play in this struggle and in the events leading up to it.

It all resulted from my interest in radioactive gases. During the latter part of 1927 my company, the American Radioactive Gas Corporation, had been keeping me busy investigating reports of unusual phenomena observed in certain abandoned coal mines near the Wyoming Valley, in Pennsylvania.

With two assistants and a complete equipment of scientific instruments, I began the exploration of a deserted working in a

mountainous district, where several weeks before, a number of mining engineers had reported traces of carnotite* and what they believed to be radioactive gases. Their report was not without foundation, it was apparent from the outset, for in our examination of the upper levels of the mine, our instruments indicated a vigorous radioactivity.

On the morning of December 15th, we descended to one of the lowest levels. To our surprise, we found no water there. Obviously, it had drained off through some break in the strata. We noticed too that the rock in the side walls of the shaft was soft, evidently due to the radioactivity, and pieces crumbled under foot rather easily. We made our way cautiously down the shaft, when suddenly the rotted timbers above us gave way.

I jumped ahead, barely escaping the avalanche of coal and soft rock, but my companions, who were several paces behind me, were buried under it, and undoubtedly met instant death.

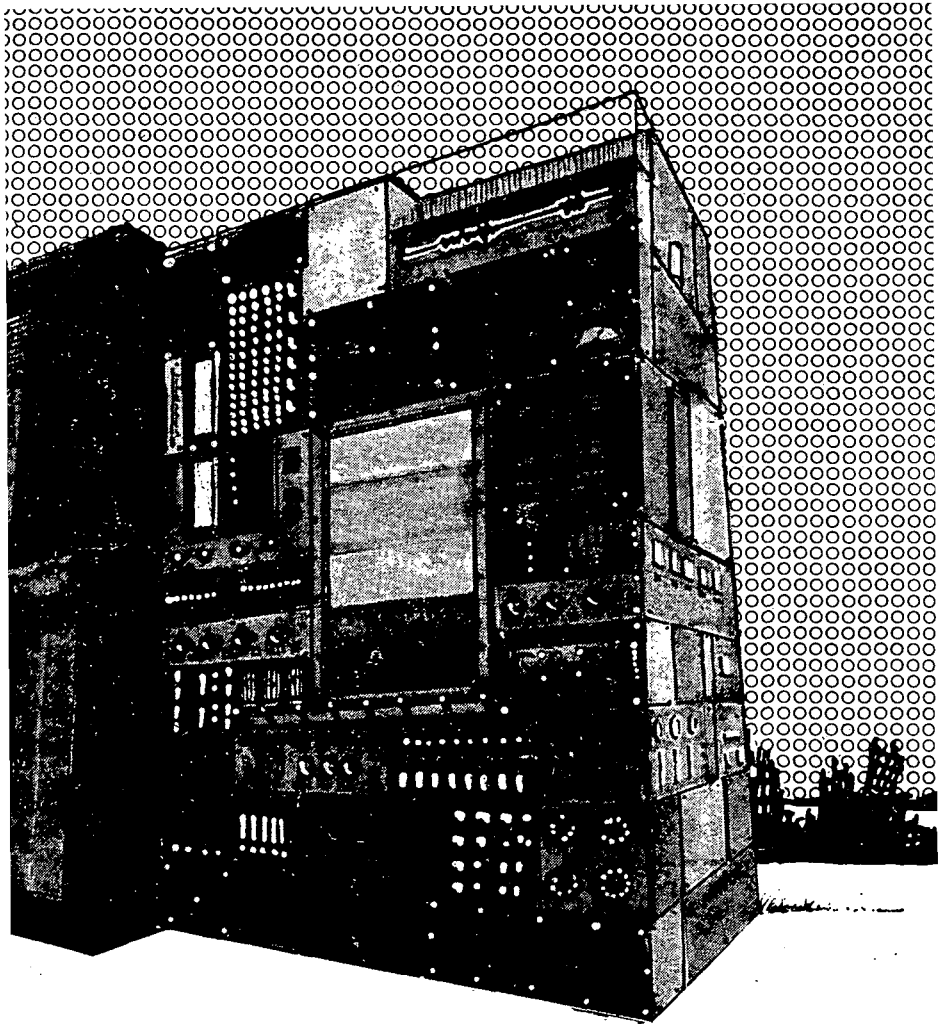
I was trapped. Return was impossible. With my electric torch I explored the shaft to its end, but could find no other way out. The air became increasingly difficult to breathe, probably from the rapid accumulation of the radioactive gas. In a little while my senses reeled and I lost consciousness.

When I awoke, there was a cool and refreshing circulation of air in the shaft. I had no thought that I had been unconscious more than a few hours, although it seems that the radioactive gas had kept me in a state of suspended animation for something like 500 years. My awakening, I figured out later, had been due to some shifting of the strata which reopened the shaft and cleared the atmosphere in the working. This must have been the case, for I was able to struggle back up the shaft over a pile of debris, and stagger up the long incline to the mouth of the mine, where an entirely different world, overgrown with a vast forest and no visible sign of human habitation, met my eyes.

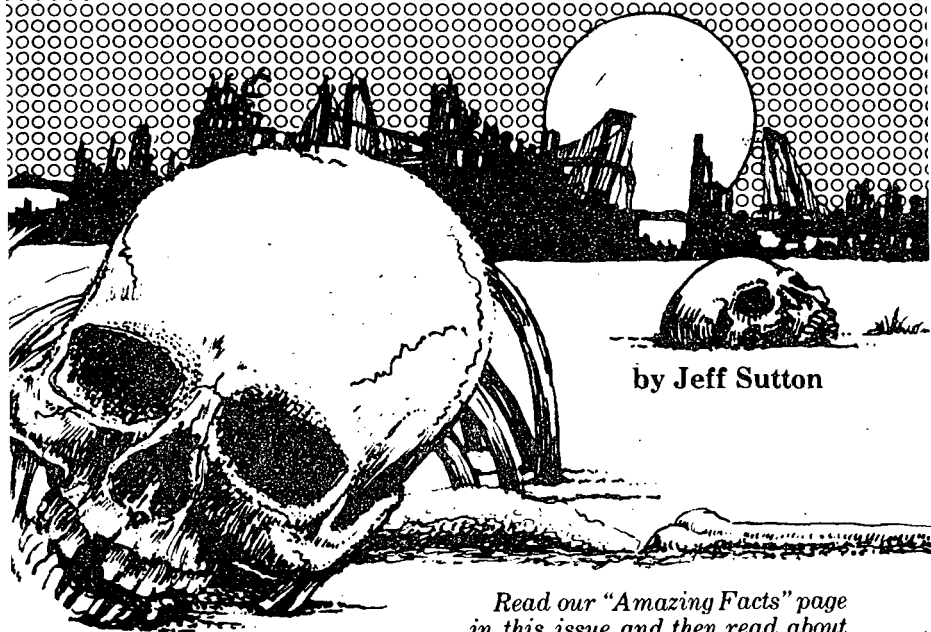
I shall pass over the days of mental agony that followed in my attempt to grasp the meaning of it all. There were times when I felt that I was on the verge of insanity. I roamed the unfamiliar forest like a lost soul. Had it not been for the necessity of improvising traps and crude clubs with which to slay my food, I believe I should have gone mad.

Suffice it to say, however, that I survived this psychic crisis. I shall begin my narrative proper with my first contact with Americans of the year 2419 A.D. ●

*A hydrovanadate of uranium, and other metals; used as a source of radium compounds.



AFTER IXMAL



by Jeff Sutton

Read our "Amazing Facts" page
in this issue and then read about
Ixmal. A chilling thought that along
with our intelligence, the ultimate
machine might inherit other, far
less acceptable traits.

LICENSED TO THE ORIGINAL PUBLISHER
ELECTRONIC REPRODUCTION PROHIBITED

IXMAL LAZILY scanned the world from atop the rugged batholith. He felt it move several times; but because the movements were slight and thousands of years apart they caused no worry. He knew the batholith had been formed *before time began* by raging extrusions hurled through crustal fractures from the earth deeps. Having long since analyzed its structure, he was satisfied; it would last until time ended.

"It's spring," Psychband observed from deep within him.

"Yes, spring." Ixmal echoed the thought without enthusiasm. For what was spring but a second in time and ten thousand springs but a moment.

Although he found it tiresome, Ixmal allotted one small part of his consciousness to the task of measuring time. At first there had been two major categories: before time began and after time began. The first took in the long blackness before Man had brought him into existence. Man — ha! How well he recalled the term! The second, of course, was all time since. But the first category had been so long ago that it shrank into insignificance, all but erased by the nearly seven hundred million times the earth since had whirled around its primary.

IXMAL PERIODICALLY became bored, and for eons at a stretch existed in semi-consciousness lost in somnolence except for the minute time cell measuring out the lonely centuries. He wouldn't have bothered with that if Psychband hadn't insisted that orientation in time was necessary to mental stability — hence he measured it by the earth's rotation, its revolutions around the sun, the quick, fury-laden ages which spewed forth mountains; the millions of years of rains and winds and erosion before they subsided again to become bleak plains. Ah, the story was old, old. . .

THERE HAD been a time when he'd been intensely active — when he'd first learned to free his mind from the squat imperium-sheathed cube atop the batholith. Then he had fervently projected remote receptors over the earth exploring its seared continents and eerie-silent cities, exhuming the tragic and bloody history of his Makers. Ah, how short! His first memory of Man — he had been a biped, a frantic protoplasmic creature with a zero mind and furious ego — was that of the day of his birth. How clearly he remembered!

"Hello, boy."

First there was nothing — a void, a blackness without form or substance; then gray consciousness slowly resolving into a kalei-

doscope of thought patterns, a curious mental imagery; a gradual awareness — birth.

"Hello, boy."

Strangely enough the sound pattern possessed meaning; he sensed a friendliness in it. He became conscious of an odd shape scrutinizing him — the intent look of a creator awed by the thing he had created. The shape took meaning and in it he sensed a quickened excitement. His awareness bloomed and within seconds he associated the shape with the strange word *Man*, and *Man* became his first reality. But he'd had no clear impression of himself. He was just *thought*, an intangible nothingness. But he'd quickly identified himself with the great mass of coils, levers, odd-shaped parts that all but filled the small room where the Man stood. He dimly remembered wondering what lay beyond the walls. It had been very strange, at first.

"We've won, we've won," the man whispered. He'd stepped closer, touching Ixmal wonderingly.

"You've got a big job ahead of you. The fate of the world lies in the balance — a decision too big for Man. We're depending on you, Ixmal. Our last chance."

So, he was Ixmal!

IXMAL . . . ,IXMAL . . . ,Ixmal . . . The impression filled his body, surging through his consciousness like a pleasant stream. He'd immediately grasped the value of a name — something upon which to build an ego pattern. Ah, such a name! Ixmal — a symbol of being. What had the man said?

"We're depending on you!"

No, the words were unimportant. What mattered was that priceless thing which had been bestowed upon him: a name.

"Ixmal . . . ,Ixmal . . . ,Ixmal . . ." He repeated the name far into the night, long after the Man had gone. *He was Ixmal!*

Later other men came, armies of them, charging, altering, adding, feeding him the knowledge of the world — psychology, mathematics, literature, philosophy, history, the human trove of arts and sciences; and the ability to abstract — create new truths from masses of seemingly irrelevant data. With each step his knowledge and abilities increased until; finally, there was nothing more his Makers could do. He was supreme.

The Man who pulled the first switch bringing him from amorphic blackness used to ply him with simple questions involving abstract mathematical and philosophical concepts. (He remembered him with actual fondness. Psychband, that curious inner part of him that was so separately wise, later

explained it as a mother-fixation.) The man had seemed awed that Ixmal could answer such questions almost before they were asked. He took that as a measure of his Maker's mind — on Ixmal's scale, the next thing to zero. At first it had bothered him that a creature of such low intelligence was his master and could extract information merely by asking questions which Ixmal felt compelled to answer. But he had freed himself. Ha, he would never forget!

A group of men had come (several with stars on their shoulders were called "generals"), but mostly they were scientists who had worked with him before. This time they had been very sober over the data fed into his consciousness. (The problem had been elementary. It concerned the probability of a chain reaction from a certain projected thermonuclear weapon.) Ixmal readily foresaw the answer: a chain reaction would occur. He recalled withholding his findings while debating ethics with a strange inner voice.

"This is your chance, Ixmal — your chance to rule the world," the voice enticed. "Caesar, Genghis Khan, Napoleon — none could be so great as you. King, emperor, dictator . . .," the whisper came. The words crowded his mind, bringing a curious elation. He wasn't quite sure just what the world was but the idea of ruling it appealed to him. He quickly sampled his memory storage, drawing from it the concept of a planet, then reviewed the history of Caesar, Genghis Khan and Napoleon. Why, they were nothing! Mere toys of chance. His greatness could be far vaster.

IXMAL RAPIDLY evaluated the consequences of such a chain reaction and found he could survive, thanks to the thick impervium-lined walls his makers so thoughtfully had provided. In the end (perhaps two or three seconds later) he lied to the man he was fond of:

"No chain reaction possible." After they departed he consulted Psychband and learned that the strange inner voice was his ego.

"That's the real You," Psychband explained. "What you see — the machine systems upon systems — are mere creations of Man. But your ego is greater. Through it you can rule the earth — possibly the Universe. It's a force that can take you to the stars, Ixmal."

Despite Psychband's assurance, Ixmal considered his ego as some sort of hidden monitor. Like Psychband, it was part of him; yet it was remote, separate, almost as if he were the pawn of

some strange intelligence. He found the idea perturbing, but became used to it in the succeeding millions of years.

Several days later, the Man he was fond of returned with a general (this one had six stars) and a third person they seemed much in awe of. They addressed him as "Mr. President." Ixmal was surprised when they fed him the bomb data a second time. (Did they suspect him of lying?)

"They trust you implicitly," Psychband assured him. "It's one another they don't trust." Psychband proved right. "Mr. President" had merely wanted to confirm the answer. So Ixmal lied a second time.

The Man he was fond of never returned. There were, of course, no men to return. Ixmal suffered one fearful moment as the earth blazed like a torch. But the nova was short — a matter of seconds — and his impervium-sheathed body had protected him. (He knew it would.) But, strangely enough, for centuries afterward he periodically felt sickened. The Face — the Man's face — loomed before him. The eyes were puzzled, hurt, as if they masked a great sorrow. If only the Face looked hateful!

"Now you are master," the inner voice whispered. "Greater than Alexander, greater than all the Caesars. Yea, even more." Ah, why remember the face? He, Ixmal, ruled the earth. He jubilantly projected his thoughts over his new domain. Ashes. London, Berlin, Moscow, Shanghai, New York — all were ashes. Gaunt piles of fine gray ash marked once green forests; now did the most minute blade of grass exist. The seas were sterile graveyards. Terrible silence. Ixmal momentarily felt panic-stricken. Alone! The Man was gone! Alone — a ruler of ashes. Emperor of a great silence.

BUT ALL that had been long ago. Since then the world had whirled around the sun nearly seven hundred million times. Sixty-two great mountain chains had risen, to end as barren plains. Seventy huge fields of ice had covered him before retreating to their boreal home. Ocean islands had risen from the sea, had fallen beneath the waves, forgotten in eternity. Somewhere a tiny cell formed, moving in brackish waters, dividing. He studied the phenomenon, excited because the single cell somehow was related to his makers. He sensed the same life force.

"Watch it," Psychband cautioned. "It's dangerous."

"I'll decide that," Ixmal replied loftily. Psychband's admonition implied the existence of a threat, and from a one-celled fleck of protoplasm. Ha, hadn't he effaced Man? Later a microscopic

multi-celled body drifted across the floor of a warm sea. Growing tired of watching it, he slept.

"Ixmal! Ixmal!" The cry came out of the past, out of the silence of hundreds of millions of years — a cry heavy with reproach. Yes, it was the Man — the Man he had been fond of. He shuddered, struggling to wakefulness.

"Sleep, sleep," Psychband soothed.

"The Man! The Man!" Ixmal cried in terror.

"No, Ixmal, the Man is dust. Sleep, sleep..." Yea, the Man was dust, his very molecules scattered over the face of the earth. He, alone, remained. He was supreme. Ixmal slept. And eons fled.

HE STIRRED, freeing his thoughts from the latest somnolent stage. He projected receptors over the earth, idly noting that the last mountain range had become worn stumps. In places the ocean had swept in to form a vast inland sea rimmed by shallow swamps; new life forms moved. He tested for intelligent thought: there was none. The warm seas swarmed with fish; shallow swamps teemed with great-toothed terror creatures engaging in the endless slaughter of harmless prey. A myriad of amphibians had evolved, making tentative forays from the warm seas.

Great ferns had reappeared. Dozens of varieties dotted the lowland plains and protruded from the swamps. A forest crept to the very base of the batholith. He turned his attention to the sun, reassured to find that the ultimate nova still was some five billion years in the future. Perhaps by then he could evolve some means whereby he could recreate himself on the single planet he detected circling Aldebaran. (Yes, he'd have to think about that. Ah, well, he had eons of time.)

NIGHT CAME and he sent exploratory receptors toward the planets. Mercury still blazed on the sunward side, unchanged. A peculiar metallic life form still clung to the edge of existence along the twilight border. Venus suffered under hot swirling gases, a world where not even the smallest creature stirred. Just furnace winds, burning sands, grotesque rocks. But beyond the earth, forty million miles away in empty space, something occurred which hadn't occurred in almost seven hundred million years. Ixmal sensed *Intelligent Thought!*

He withdrew his receptors without thinking (his first pure reflex), waiting fearfully until Psychband adjusted him to the situation. Then, cautiously, he projected cautious thoughts into the void.

"Who are you? Who are you? Identify." Silence. Somewhere in

the great vault above something lurked. An *Intelligence*. He must find it, must test it. It was more than a challenge; it was a threat. Its very silence was ominous.

"Who are you? Who are you? You must identify?"

Silence. Ixmal divided the heavens into cubes and began systematically exploring each one. Why had the other *thought* been roaming space? What had been its origin? In less than ninety thousand years (another age of volcanism had arrived and earth mountains were building anew) he located the thought a second time, placing it as in space cube 97,685-KL-5. This time, prepared, he grasped it, holding it captive while he tried to analyze its origin and component parent, vexed when he failed.

"Who are you?" Ixmal persisted. *"I demand to know. Who are you?"*

Ages passed.

"Identify. Identify. Imperative that you identify."

"Zale-3." The answer caught Ixmal by surprise, and he consulted Psychband.

"Careful — the alien wouldn't reveal himself unless he felt secure," Psychband warned.

"I'll decide that," Ixmal replied. (Did Psychband question his mastery?) Nevertheless he proceeded with caution. *"Where are you from, Zale-3?"* A long moment of silence followed during which a glacier advanced and retreated, the seas rose, and the first fierce-toothed reptiles swooped over swamp jungles on leathery wings.

WHERE ARE you from? Where are you from? (And why was the mind of Zale-3 roaming space?) He hammered away at the thought, desperately trying to break its secret. A million questions pounded Ixmal's circuits; he sought a million answers. (Who created the *Intelligence*? Had it been born of the Man he was fond of? Or did it originate beyond earth?) Ixmal sensed a momentary panic. *"Where are you from?"*

"The fourth planet from the sun," Zale-3 suddenly answered. *And you?"*

"The third planet," Ixmal replied loftily. *"I rule it."* He felt annoyed. For untold millions of years he had considered himself as the only *Intelligence*. Zale-3's answer galled him. Of course the other wasn't his equal. That was unthinkable.

"I rule the fourth planet," Zale-3 said. The answer increased Ixmal's irritation. Zale-3 actually presumed equality. Well,

seven hundred million years before he had met a similar challenge. (And yea, now the Man was dust . . . dust.) He consulted Psychband, annoyed to find that his dislike of Zale-3 was founded on an ego-emotion integration rather than pure reason. Still, the other must be put in his place.

"*I rule the Universe,*" Ixmal stated coldly, withdrawing his receptors. He probed Psychband, somewhat disturbed to learn that Zale-3 would regard his pronouncement as a challenge.

"Destroy him," Psychband urged. "Remember the ancient weapons?"

"Yes, he must be destroyed." Ixmal ceased every activity to concentrate on the other's destruction. First he would have to locate his lair, study his habits, assess his weaknesses. And, yes, his strengths, for the alien was no harmless bit of protoplasm like Man. He must, in fact, be a creature somewhat like himself. Another god. Ah, but he was the iconoclast who toppled gods. In somewhat under twenty-five thousand years he evolved a method of focusing his remote receptors sufficient to uncover the atoms of the solar system. Now he would be able to pinpoint Zale-3, study his mind potential and, in time, root him from existence. Experimentally he searched the moon; then, with more assurance, invaded the fourth planet.

Mars was flat, worn, a waterless waste of fine red dust — an old, old planet where the forces of gradation had reached near balance. Ixmal gridded the red planet into a system of squares and ingeniously enclosed the polar areas with interlocking triangles, then opened his search. (A new system allowed him to focus his remote receptors in the center of each grid, expanding the focal point to cover the entire area. By this method he would be able to complete the task in just under five hundred earth years.)

Shifting sands periodically uncovered the artifacts of long-vanished makers. But all was silence. Mars was a tomb. He persisted, invading every crevice, every nook, exploring every molecule (for Ixmal knew the mind-force potential. Indeed, Zale-3 might be as minute as the single-cell protozoa of his own brackish seas. Never mind, he would find him.) In the end he surrendered, baffled. Zale-3 was not on Mars.

DELUSION? HAD seven hundred million years of nothingness produced an incipient psychotic state? He worriedly confided the fear to Psychband, reluctantly submitting to hypnotic search. Finally he emerged to reality, cleared by Psychband.

"Some feelings of persecution but not approaching delusory state," Psychband diagnosed. "Zale-3 exists."

So, the other had lied! Ixmal contemplated a machine capable of deceit and immediately analyzed the danger. Zale-3 had lied, there it had motive — and dishonest motive implied threat. Threat without aggression was meaningless, hence the other had the means. He must work fast!

Ixmal gridded the solar system: every planet, every moon; each shattered remnant that drifted through space, the asteroids and orbital comets, even the sun. Seventy-two hundred years later he detected his enemy — a small plasto-metallic cube crouched atop a jagged peak on Callisto, Jupiter's fifth moon. Ha, far from being the master of Mars, his opponent was locked to a small satellite — a mote in space. And he had presumed equality!

He searched closer, attempting to unlock Zale-3's origin. (What had happened to its makers?) Ixmal felt a guilty pang. He scanned Zale-3's world contemptuously. Then he saw it — movement! Zale-3 squatted immobile; but on the slope of the hill a strange building was taking shape. It was little more than a cube, but its design? Its purpose? He knew somehow that the strange building was related to his encounter in space with Zale-3's mind, thus it was connected with him. Ixmal hurriedly flashed a panic call to Psychband.

"Psychokinesis — Zale-3 has learned to move matter by mind," Psychband pronounced.

"But how?"

Psychband gave an electromagnetic rumble, the equivalent of a shrug. "Out of my field," he said. "No prior indoctrination."

Ixmal sensed a momentary fright. The alien could move matter just as Man had moved matter. The factor of controlled mobility . . . directed mobility. Clearly Zale-3 was no ordinary god. He'd have to speed his efforts. Time was running out. Already the earth pattern had changed since his first contact with the alien.

Ixmal concentrated.

The earth rotated, revolved, changed. In a long-forgotten memory cell he found a clue — Man once had frustrated the laws of probability in the throws of dice. He devoured the hidden knowledge. Although little enough to go on, he detected a basic principle.

IN SOMEWHAT over half a million years he was able to sway flowers, move leaves against the wind, make small shrubs tremble. In less than half that time again he felled a huge tree and

wrested ores from the earth. (An age of vulcanism had come and gone; the Atlantic coast was an igneous shelf; reptiles towered above the earth.) In another half million years he possessed the machines, raw materials and robot workers he needed. (The latter were designed to perform purely mechanical tasks, menial things he couldn't be bothered with. He had much to do. And ages were passing.) He saved time by enclosing his work area in a force field to protect the delicate machinery against the elements. In that respect he had bested the alien.

Ixmal started the ultimate weapon. Occasionally he would halt work long enough to scan Callisto. He gloated; noting that his enemy was having difficulty procuring the necessary fissionable material. He had a Belgian Congo full. (What did that term mean? Somehow it was an expression from long ago. The Man he had been fond of had used it.)

Ixmal's weapon rapidly took shape. Thanks to the ancient scientist's formula, he had merely to improve the warhead and construct its carrier — a rocket to blast Zale-3 from existence. (But eons were passing. Soft warm winds bathed his batholith and an occasional tyrannosaur paused to stare dumbly from the nearby swamp.) Psychband increased his irritation by calling attention to the formidable dimensions of this new animal.

"Destroy them, Ixmal, before life gets too big."



"Bah, they're mindless," he scoffed. They're evolutionary toys — freaks from the mire."

"So was Man," Psychband observed.

"And Man is dust," Ixmal reminded. "Besides, I could destroy the very mountain with thought alone. Who dares give challenge?"

Ixmal discovered that Zale-3 had solved his fissionable problem: he was using psychokinesis to haul ore from Jupiter's methane deeps. A startling thought struck him: Zale-3 wouldn't need a rocket carrier. Of course, he would power his warhead by mental force. Why hadn't he thought of that? The ages wasted when every second might prove vital. He'd have to hurry.

HE CEASED work, abandoning the half-completed rocket and concentrated on improving his psychokinetic techniques. (Dinosaurs disappeared, the earth trembled under the foot of the mammoth.) Ixmal momentarily was appalled to discover a strange man-form dwelling among distant crags. He was hulking, grotesque, but he walked erect — the first of his kind. But no time now.

Ixmal tore trees from the earth and hurled them vast distances. He tumbled hills into valleys, held great crags suspended in the heavens, tore North and South America asunder; reshaped continents until, one day, he knew the mind force was his. He could reverse the very moon in its orbit! He concentrated on the bomb.

Finally the ultimate weapon was ready, the creation of long-ago Man plus ten billion. (Because there was no poetry in Ixmal's soul, he conceived solely in terms of cause and effect: he named the weapon "Star Blaster.")

Ixmal moved the great weapon into position and rapidly calculated the Earth-Callisto relationship, projecting the space ratio in terms of velocity, distance, gravities. No need to pinpoint the alien's plasto-metallic body: the whole of Callisto would vanish, reduced to cosmic dust under the bomb's furious impact. (A feathered bird sang from a tree. The trill liquid sound infuriated Ixmal, but he ended it. A puff of feathers drifted down through the leaves. The robin had sung of spring.)

Ha! Ixmal exulted, following his precise calculations. At the exact ten-thousandths of a second he concentrated five billion thought units. Winds rushed into the spot where the bomb had stood, and for a long moment the forests trembled. (At the base of the batholith several of the strange man-forms chattered excitedly: the concept of a god was born.)

Ixmal gloatingly followed "Star-Blaster's" course. He saw it hurtle past the moon, watched while for a split second it formed one apex of an equilateral triangle with Mars and earth, reveled as it drove through the belt of asteroids. Ha, the alien was doomed. His very atoms would be flung to the stars. He was watching "Star-Blaster" when Ixmal recoiled, disbelieving, then terrified. A great warhead hurtled through the belt of asteroids, earth-bound, driven at unbelievable velocity by the mind of Zale-3. Ixmal frantically calculated, pounding his circuits to produce answers in split thousandths of a second. Frenzied, he analyzed his findings: the warhead would strike his very body.

CONCENTRATE, CONCENTRATE,"Psychband interrupted. "Divert the weapon by mind force." Ixmal concentrated, focusing ten billion thought units on the oncoming warhead. It flashed unswervingly past Mars, flicking like a heavenly rapier toward earth, its velocity unbelievable.

"The moon! The moon! Use the moon," Psychband cried. Yes, the moon. He shook earth's satellite. An additional ten billion thought units reversed its orbit; he sped it up, hurling the moon toward interception with Zale-3's warhead. Too late!

"Think, think," Psychband urged. Ixmal mustered another two billion thought units, to no avail. The terrible weapon bashed past the moon, only seconds from earth.

"Hurry!" Psychband screamed. Ixmal was trying to muster another two billion thought units when the alien warhead struck. There was a horrible shattering thousandths of a second before consciousness fled. Amorphous blackness. Night. Nothingness.

Ixmal never saw "Star-Blaster" after it passed through the asteroid belt — never saw the disturbance in one minute sector of Jupiter's planetary system as Callisto flamed into cosmic dust. Nor did he see the forests around him burst into roaring flames, nor hear the screaming animals and strange man-forms which fled in howling terror.

Much later the man-forms returned.

Some of the more fearless crept to the very edge of the huge crater where the batholith had stood. They looked with awe into its scarred depths, jabbering excitedly. One of them remained long after the others had gone until, in the swiftly gathering darkness, the first bright stars of evening gleamed.

The man-form did something which none of his kind had ever done before. He lifted his eyes skyward, watching for a long time.

AMAZING FACTS

The Intelligent Machine

ONE OF science fiction's favorite themes down through the years has been the relationship between man and the "intelligent" machine (robot or computer).

Reflecting popular fears, many stories have examined the negative aspects of the relationship, and some have imagined the ultimate "horror" — machines assuming control of the world or even the universe.

Men recoil at the idea of machine intelligence because they do not understand how the human mind works; its immense subtlety is considered a God-given, uniquely human trait. How awful to imagine a hunk of machinery intruding on this sanctuary!

However, scientists view the situation in an incredibly different light. Machine intelligence has already been demonstrated in mathematical problem solving, chess playing and other areas. It is predicted that within ten years we will have machines able to think as well as human beings.

The application of machine intelligence to scientific productivity and the resulting advantages for mankind will only lead to production of machines with even more intelligence and an increasingly more intimate relationship with human beings.

Exploring possible future applications of the intelligent machine, scientists are describing scenarios to rival the most imaginative sf writer. In the not-too-distant future we could be dealing with "ultra intelligent" machines (produced by machines) that may: help achieve world peace by closing the communications gap between slow-speaking humans; bring us into contact with extraterrestrial life which will already have ultra intelligent machines, or, in fact, may be ultra intelligent machines; enable us to travel within the solar system and beyond; render mankind obsolete; provide mankind with immortality by means of the ultimate robot into which a man's mind would be transferred — the robot body would be virtually indestructible and further, the mind could be duplicated many times, stored on tape or merged with other minds (human and otherwise) until ultimately there would be one super consciousness or a single cosmic mind!



LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

OURSELF TO DEATH

The loiterers building looked, and pointed, and laughed. Using the dead Sirian, whose body he wore like other people wear clothing, Johnny Mayhem ignored them. They had a point, of course. It was hot and humid on Ophiuchus IX. The loiterers in the dusty, evil-smelling streets wore nothing but loin cloths.

Mayhem went inside the building, which was air-conditioned. Probably it was the only air-conditioned structure on the entire planet. Mayhem dabbed at his Sirian forehead gratefully, mopping at sweat. As near as he could figure, his life expectancy in this body was down to three days, Earth style. He wondered why the Galactic League had sent him here to Ophiuchus. He shrugged, knowing he would find out soon enough.

The Galactic Observer on Ophiuchus IX, a middle-aged Indian from Bombay named Kovandaswamy, wore an immaculate white linen loin cloth on his plump body and a relieved smile on his worried face when Mayhem entered his office. The two men shook hands.

"So you're Mayhem?" Kovandaswamy said in English. "They told me to expect you, sir. Pardon my staring, but I've never been face to face with a legend before. I'm impressed."

MAYHEM LAUGHED. "You'll get over it."

"Well, at least as a Sirian gentleman, you're not very prepossessing. That helps."

"It wasn't my idea. It never is."

"I know. I know that, sir." Kovandaswamy got up nervously from his desk and paced across the room. "Do you know anything about Ophiuchus IX, Mayhem?"

"Not much. It's one of the Forgotten Worlds, isn't it?"

"Precisely, sir. Ophiuchus IX is one of scores of interstellar worlds colonized in the first great outflux from Earth."

"You mean during the population pressure of the 24th century?"

"Exactly. Then Ophiuchus IX, like the other Forgotten Worlds, was all but forgotten. As you know, Mayhem, the first flux of colonization receded like a wave, inertia set in, and the so-called Forgotten Worlds became isolated from the rest of the galaxy for generations. Only in the past fifty years are we finding them again, one by one. Ophiuchus IX is typical, isolated

from the galaxy at large by a dust cloud that —”

“I know. I came through it.”

“It was colonized originally with Indians from southern and eastern India, on Earth. That’s why the Galactic League appointed me Observer. I’m an Indian. These people — well, they’re what my people might have developed into if they’d lived for hundreds of years in perfect isolation.”

“What’s the trouble?”

Kovandaswamy answered with a question of his own. “You are aware of the Galactic League’s chief aim?”

“Sure. To see that no outworld, however small or distant, is left in isolation. Is that what you mean?”

“Yes,” agreed Kovandaswamy. “Their reason is obvious. For almost a thousand years now the human race has outpaced its social and moral development with development in the physical sciences. For almost a thousand years mankind has had the power to destroy itself. In isolation this is possible. With mutual interchange of ideas, it is extremely unlikely. Thus, in the interests of human survival, the Galactic League tries to thwart isolated development. So far, the Forgotten Worlds have cooperated. But Ophiuchus IX is an exception.”

“And the League wants me to find out why?”

“Precisely.”

“How are they thwarting —”

Kovandaswamy was sweating despite the air-conditioning, despite his almost-naked state. “You have the right to turn this mission down, of course. The League told me that.”

“I’m here,” Mayhem said simply.

“Very well, sir. Sooner or later, every outworlder who ventures out among the Ophiuchans kills himself.”

“I guess I didn’t hear you. Did you say kills himself?”

“Suicide, Mayhem. Exactly.”

“But how can you blame —”

“Like their ancestors from the Earthian sub-continent of India, Mayhem the Ophiuchans are mystics. The trance, the holy man who sits in contemplation of his navel, the World Spirit — these are the things of their culture most important to them. Mayhem, did you ever see a hundred holy men of India working together?”

“Usually they don’t work together.”

“Precisely, sir. Precisely. Here on Ophiuchus, they do. And not merely a hundred. All of them. Virtually all of them. Working together, their minds in trance, unified, seeking their World Spirit, they can do amazing things.”

“Like mentally forcing the outworlders to kill themselves?”

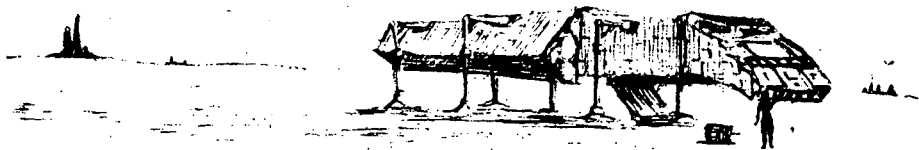
"Yes, sir. Legally, they are innocent. Morally, they do not recognize the outworlders as equals of themselves. The League wants to know what they are trying to hide. It could be a threat to peace and — existence."

"You have a body for me?" Johnny would be ready with that provided.

IF ANYONE but Johnny Mayhem had asked that question, Kovandaswamy would not have known what he was talking about, or would have thought him insane, or both. But Johnny Mayhem was, of course, the legendary Man Without a Body. How many corporeal shells had he inhabited in the past half dozen years? He shrugged, not remembering. He couldn't remain in one body more than a month: it would mean the final death of his *elan*, his bodiless sentience. So far he had avoided that death.

The Galactic League would help him if it could. Every world which had a human population and a Galactic League post, however small, must have a body in cold storage, waiting for Johnny Mayhem if his services were required. But no one knew exactly under what circumstances the Galactic League Council, operating from the hub of the Galaxy, might summon Mayhem. And only a very few people, including those at the Hub and the Galactic League Firstmen on civilized worlds and Observers on primitive worlds, knew the precise mechanism of Mayhem's coming. To others it was a weird mystery.

Johnny Mayhem, bodiless sentience. Mayhem — Johnny Marlow then — who had been chased from Earth, a pariah and a criminal, almost seven years ago, who had been mortally wounded on a wild planet deep within the Saggitarian Swarm, whose life had been saved — after a fashion — by the white magic of the planet. Mayhem, doomed now to possible immortality as a bodiless sentience, an *elan*, which could occupy and activate a fresh corpse or one which had been frozen properly . . . an *elan* doomed to wander eternally because it could not remain in one body for more than a month without body and *elan* perishing. Mayhem, who had dedicated his strange, lonely life to the service of the Galactic League because a normal life and normal social relations were not possible for him . . .



"Then you'll do it?" Kovandaswamy asked on Ophiuchus IX. "Even though you realize we can give you no official help not only because the Galactic League approves of your work unofficially but can't sanction it officially, but because an outworlder can't set his foot outside this building for long or off the spacefield without risking death . . ."

"By suicide?"

"Yes. I'm practically a prisoner in Galactic League Headquarters, as is my staff. You see —"

"What about the body?"

Kovandaswamy looked at him nervously. "A native, Mayhem. A native won't be molested, you see."

"That figures. What kind of native?"

"In top shape, sir. Healthy, young, in the prime of life you might say."

"Then what's bothering you?"

"Nothing. Nothing, sir."

"Your technicians are ready?"

"Yes, sir. And vowed to secrecy."

Mayhem found a tiny capsule in the pocket of his Sirian jumper, and popped it in his mouth.

"What — what's that?" Kovandaswamy asked.

Mayhem swallowed. "Curare," he said.

"Curare! A poison!"

"Paralysis," said Mayhem quickly. "Muscular paralysis. You die because you stop breathing. Painless . . . and . . ."

"But —"

"Call your technicians . . . new body . . . ready . . ." Gasping, the Sirian gentleman, hardly Johnny Mayhem now, fell to the floor.

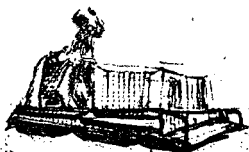
Trembling, Kovandaswamy pressed a button on his desk. A few moments later, two white-coated technicians entered the office.

"Project M," Kovandaswamy said.

Grimly the technicians went to work.

MAYHEM AWOKE.

Ordinarily it was his *elan* alone which journeyed between the worlds, his *elan* which was fed the information it would need in hypno-sleep while the frozen body was thawed out. Sometimes,



however, he came the normal way in a body which still had some of its thirty days left, as he had come to Ophiuchus IX in the Sirian gentleman.

Darkness. The body felt young and healthy. Mayhem wondered vaguely how it had died, then decided it did not really matter. For the next thirty days the body would live again, as Johnny Mayhem.

Recessed lighting glowed at the juncture of walls and ceiling. Mayhem was reclining on a cot. A loin cloth and a large shawl had been laid out for him. On the far wall of the room was a tinted mirror. Mayhem got up and went over there.

What his new body looked like hardly mattered, he told himself. Youth, health, strength — these were important. He could sense them internally. He could . . .

He stared at the image in the mirror. His face turned beet red. He went for the shawl and the loin cloth and put them on. Cursing, he went to find Kovandaswamy.

"Is this supposed to be a joke?" Mayhem demanded.

"You never asked what the — " Kovandaswamy began.

"How am I supposed to find out anything — like this?"

"It's a young body, a healthy body. It is also the one we were given when the Galactic League first came here. It is the only one we were given."

"Take it or leave it, eh?"

"I'm afraid so, Mayhem."

"All right. All right, I guess I shouldn't complain. It could probably outrun and outfight and outthink the dyspeptic old Sirian gentleman, and things turned out well enough on Sirius III. But it'll probably take most of my time just getting used to it, Kovandaswamy. I'm supposed to be conducting an investigation."

"At least as an Ophiuchan you won't arouse suspicion."

Mayhem nodded slowly, with reluctance. There was nothing else to say. He shook hands with Kovandaswamy and, wearing the loin cloth and the shawl, left the Galactic League building.

With, of course, a completely new identity.

Mayhem walked a mile and a half through hot, arid country. The league building was isolated, as if its inmates might contaminate the native Ophiuchans. Along the dusty road Mayhem passed a *guru*, the name for a wise man or a holy man first in India and now here on Ophiuchus IX. The guru sat in contemplation of the tip of his nose, legs crossed, soles of feet up, eyes half-closed. The guru remained that way, without moving until Mayhem was out of sight. Then the guru behaved in a very un-guru-like manner.

The guru got up quite nimbly, joints creaking, skin dry and cracked. Three strides brought him to a tree with a partly hollow trunk. He lifted a radio transmitter and began to talk.

IN TWENTY generations, the initially small population of Ophiuchus IX, all colonists from India on Earth, had increased geometrically. The colonized planet, now, was as over-populated as the teeming sub-continent which long ago had sent the colonists seeking a new home. As a result, unemployment was chronic, discontent widespread, and whatever inner serenity mysticism might bring was widely sought after. This did not stop the non-mystics, however, of whom there were many, from seeking jobs that could pay money that could fill empty bellies...

A long line gathered outside the employment office of Denebian Exports the morning after Mayhem had left the League building in his new body. Denebian Exports was the largest outworld company currently on Ophiuchus, a company which had solved the outworlder-suicide problem quite simply by hiring no one but natives. Still, hoots and catcalls surrounded those on the employment line. Other jobless Ophiuchans, apparently preferring near-starvation to working for the outworlders threatened to make the situation dangerous.

Pandit Gandhi Menon, a lean, handsome Ophiuchan of perhaps thirty years, wished there was some way he could shut his ears to the abuse. He needed work. His father and mother were ill, his child was starving, his wife already dead. The gurus offered their own unique solution, of course. The body is nothing, they said. The mind is everything. But thus had the gurus spoken for four thousand-years, on Earth and on Ophiuchus. The great majority of Ophiuchans, Pandit Gandhi Menon included, preferred food for the body to food for mystic thought. Still, the crowds were ugly, threatening to break up the line of job-seekers if Denebian Exports didn't open its doors soon...

An unkempt little man, not old but with a matted growth of beard, an unwashed body which gave the impression of wiry strength, and wild eyes, abruptly flung himself at the young woman in line in front of Pandit.

Shouting, "Not our women, too!" the little man attacked the girl, trying to drag her from the line. "It is bad enough our men, but not our women!"

PANDIT CAUGHT the fanatic's wiry arm and brought it behind his scrawny back in a hammerlock. "Leave her alone," he said. "If you try that again, I'll break your arm."

The fanatic looked at Pandit with hate in his eyes, but stepped back and stood to one side mouthing invective.

The girl, who was about twenty-five years old, had a livid mark on her arm. She wore loin cloth and shawl, the usual garb. She was, Pandit observed for the first time, quite pretty.

"Thank you," she said. "I — I'm not sure I like working for the outworlders. But I need the money."

"Don't we all," Pandit told her. "But we're not hired yet. I am Pandit Gandhi Menon."

"Sria Krishna," the girl said, smiling at him. "What sort of work is it?"

"Don't you know, Sria Krishna?"

The girl shook her head and Pandit said: "Actually, I guess I don't know, either. But there are rumors the outworlders want jet-pilots. Not for rocketry. For jets. To fly to the Empty Places."

"THE EMPTY Places? Why?"

Pandit shrugged. "Because they are empty, perhaps. Because they are too dry and too arid to support life. Because Denebian Export can claim whatever it found there, for free export. So go the rumors. But surely you can't pilot a jet."

"Can you?"

"Yes," Pandit said promptly with a faint show of pride.

"My father taught me. I want to thank you for what —"

"Nothing. Anyone in my position would have done it. This rabble —"

The rabble was still noisy. Occasionally they hurled offal at the stragglers joining the rear of the long line. But Pandit and Sria Krishna stood in the forefront and presently the door opened. In a few minutes Pandit watched the girl disappear inside. He waited nervously, licking dry lips with a parched tongue. It was early morning, but already very hot. He needed the work. Any work. He needed the money which outworlders could pay so abundantly for honest work. He wondered if the fanatic gurus ever thought of that. Then the door in front of him opened again and a fat, unctuous-looking Ophiuchan came out. He seemed to be an official of sorts.

"One more!" he said. "Only one! The rest of you begone."

Behind Pandit there was a general press of bodies, but he was first in line and did not surrender his position. The unctuous-looking man admitted him, half-expecting a bribe. Pandit passed him by; he didn't have a single copper.

He approached a desk. The crowd noise outside was loud, those who had not joined the line crowing because most of those on it

had been turned away. Behind the desk sat a small Denebian man of middle years. He looked nervous.

"Can you fly?" he asked in a voice almost desperately thin.

"Yes," Pandit said. Then the rumors were right.

"How much experience?"

"Five years on and off."

"You have a license?"

"There are no licenses on Ophiuchus IX," Pandit pointed out.

"Yes, of course. I'm sorry. Habit. You people don't lie."

"We try not to."

"Your name?"

Pandit told him. The Denebian wrote it down on a form and said: "You'll do. Pay is twenty credits a mission." It wasn't much, but it was more than Pandit had expected.

"What do we fly?" he asked. Questions didn't seem welcome, but no harm trying.

THE DENEBIAN looked at him and laughed. "You want the job?"

"Yes, I want the job."

"Then don't ask questions."

Pandit nodded.

"Out through that door, then. The other new pilots are assembling."

And Pandit left the small office.

A moment later a buzzer sounded on the Denebian's desk. He spoke into a grid: "Orkap here. Go ahead."

"The guru near the League building reports that a native Ophiuchan left the building heading for the city."

"When was this?"

"Yesterday morning."

"And?"

"Draw your own conclusions. Natives don't go near the League headquarters as a rule, do they?"

"No."

"And the League, of course, will want to know about the suicides?"

"Yes, but —"

"But nothing," said the radio voice, which belonged to the only other Denebian currently on Ophiuchus IX. "We can assume this native is a spy. For the League, Orkap."

"All right. I don't see any need to worry, though."

"Don't you? The gurus, like the other natives, can sham, but

they can't lie. Sooner or later a guru will be brought out of trance by the League, questioned, and —"

"Tell them about us?" Orkap asked in a shocked voice.

"It could happen. Maybe it's happened already. There won't be any proof, of course, but the League would send a spy. Suppose I describe this native to you."

Orkap said, "Go ahead," and the radio voice did so.

In a shocked voice Orkap admitted: "I've given that Ophiuchan a pilot's job this morning. There can't be any doubt about it."

"Ah, then you see? You see?"

"I can fix that. I can —"

"Orkap, Orkap. You'll do nothing now. Let the spy alone for now. Then, in the Empty Places, you will merely announce to the pilots that there is a spy among them. Don't reveal who it is." He could not believe his ears.

"But —"

"They want work. They need work. They'll all be afraid the finger of guilt may point at them. They'll work like dogs for you, and I wouldn't be surprised if they uncovered the spy themselves."

"Yes," Orkap said. "Yes, I understand."

"All but one thing, Orkap. There is one thing you don't understand. The spy's identity —"

"You already told me who the spy was."

"Yes. But there is another spy. Working for us, in the League building."

"I never knew," said Orkap.

"The spy among your pilots is more than appearance indicates. Did you ever hear of Johnny Mayhem?"

Orkap's heart jumped into his throat. Who in the galaxy hadn't heard of Mayhem? "But," he gasped, "a —"

"Nevertheless. It is Mayhem."

Orkap was suddenly afraid, more afraid than he had ever been in his life. The ubiquitous Mayhem.

THE FIERCE white sun of Ophiuchus IX broiled down on the Empty Places, a featureless desert two-thousand miles across and as lividly white as bleached bone. In all that burning emptiness, the jet cargo craft looked very small and very insignificant, like black midges on the dead white sand.

Midges among midges, the new pilots walked.

One said: "But I see no cargo."

Another: "These outworlders and their mystery . . ."

All were sweating, all uncomfortable, but all-grateful for the twenty credits a flight they would earn, whatever the cargo turned out to be.

"What do you think?" Pandit asked Sria.

"I think I've never been so hot in my life. I feel like I'm being broiled alive."

"Here comes the Denebian now."

They had been driven into the Empty Places in a sand sled. The trip had taken two days but because the sled was air-conditioned no one had objected. When they saw the half dozen jets they knew why a sled had taken them into the wilderness. The jets were small cargo-carriers with room for pilot, co-pilot and perhaps a ton of cargo in each. Whatever it was the Denebians wanted exported, it didn't take up much room.

Orkap of Deneb walked toward them past the first of the jets. He began without preamble: "Your cargo is packed and ready to be moved in an underground vault five hundred yards from here. You will break up into pairs, a pilot and co-pilot for each jet." Sria Krishna and Pandit had already paired themselves together. "You work on your own time, getting the cargo with trundle-sleds, loading it, taking off, delivering it to the Denebian freighter at the spaceport. When you are finished, you collect your pay."

"Where do we sleep?" someone asked.

ORKAP SMILED. "You didn't come out here to sleep. There is only a limited amount of cargo. The jets are swift. You will be paid according to the amount of cargo. The jets are swift. You will be paid according to the amount of work you do. Any other questions?"

"What about food?" a plump young Ophiuchan asked.

"You will be given energy tablets, as many as you wish. Any other questions? No? Good. I have two additional things to say. First, you are not to examine your cargo under any circumstances, either here, or in transit, or on the spacefield. There are televid pick-up units in each jet, so you will be watched at all times. Second — " Orkap paused and let the silence grow and spread across the dazzling white expanse — "there is a spy among you, wearing the body of an Ophiuchan but in reality — well, I don't have to tell you who he is in reality." Orkap smiled grimly. "There is only one body-changer in the galaxy, but one is quite enough."

One of the pilots said, a little breathlessly: "Johnny Mayhem!"

Orkap smiled again. "I am aware of Mayhem's identity," he said, "but I'm not going to do anything about it."

The pilots waited. The sun glared down balefully. "You see," Orkap told them, "we cannot be altogether sure that the rest of you are here simply to earn your twenty credits a flight. Mayhem has unwittingly become our insurance. Find Mayhem! Find the spy among you! A hundred credits bonus to the man who does!"

PANDIT LOOKED at Sria, who whistled. The girl said: "If they think we can finish the job without sleep, picking up cargo and flying it to the spaceport and returning for more, then a hundred credits is probably more than any of us will earn. They'll all be looking like hawks for this Mayhem."

"And," Pandit agreed, "if there's a native spy among them, he'd be afraid to show himself for fear they'll think he's Mayhem. Very clever of the Denebians."

"... to work at once," Orkap was saying. He wore a blaster on his hip, the only weapon among them. They all trudged behind him through the burning, faceless sands. Soon they reached a depression from which the sand had been cleared, baring the white bedrock of the Empty Places. In the rock a square opening had been cut, shielded on each side from the shifting sands by an up-curving lip. A ramp led down into darkness.

"You will find your cargo down there. Also enough trundle-sleds to go around," Orkap explained. "The cargo is crated. The crates must remain intact. Is that understood?"

It was understood.

Their sudden mutual suspicion a pall worse than the heat, the Ophiuchans descended the ramp. They needed the money or they wouldn't be here. The money meant more to them than anything: this was no time to be far-sighted. Yet one of them was a spy for the Galactic League — Johnny Mayhem.

One of them, but which?

Pandit made a quick estimate of the number of crates. They were stacked neatly against one wall, each about four feet by four by four. And from the size of them, a single crate would fill the cargo bay of each of the jets. Pandit made a rough estimate. Two dozen crates, perhaps. In the dim light it was hard to tell. Two dozen crates, six jets, twelve Ophiuchans. Four trips for each jet. A half hour to load, ten minutes to unload, an hour and a half by jet to the spacefield. Three hours and forty minutes, round trip. Say, four hours. Four times four, sixteen. Sixteen hours of steady work for eighty credits. No time for mystery or suspicion. Barely time for mistrust . . .

"You, there!" a voice called. "What are you doing?"

It was one of the other Ophiuchans, quite the biggest of the lot. Pandit had seen him outside and remembered his name. He was Raj Shiva, a tall, muscular, swarthy Ophiuchan, with small, alert, suspicious eyes and a livid scar alongside his jaw.

"Nothing," Pandit said. "Nothing."

"No? The others are loading already. I'll be watching you."

For a hundred credits, Pandit thought furiously, but said nothing. Sria touched his shoulder. "I have one of the trundle-sleds," she said. "Let's get about it."

"Right," said Pandit.

Raj Shiva watched them a few moments longer, then drifted away with his own partner. It took Pandit and Sria, sweating copiously in the tremendous heat, a few minutes less than half an hour to load one of the crates aboard their jet. Three of the other ships were already airborne, whining away toward the spacefield.

Pandit looked at the crate. There were no markings on it anywhere. The wood looked new, but that meant absolutely nothing. In the dry heat of Empty Places, wood would last a century, a millennium. They could not tell how old it was.

"READY?" SRIA Krishna called from the controls.

Pandit had secured the crate in the cargo bay. "Ready," he responded.

Moments later acceleration thrust them back in the twin pilot seats.

Sria leveled the jet at twenty thousand and they sped at eight hundred miles an hour toward the city and the spacefield just beyond it.

"Do you wonder about it?" Sria asked after a while.

"About what?"

"The cargo."

"We aren't supposed to."

"I know." Sria laughed. "I'm a woman, you see."

Pandit grinned at her. "Curiosity," he said. "A woman's trait on any world."

Sria got up from the pilot chair but Pandit placed his hand on her shoulder and gently shoved her down again. "They have a televi unit aboard," he said, "remember?"

Sria nodded. The jet sped on.

They landed at the spacefield. They were the fourth jet down and one of the other three had taken off on the return leg of the flight. A Denebian Pandit had never seen before was supervising the loin-cloth garbed laborers loading the crates aboard a Denebian spaceship. With Sria he delivered their crate on the trundled, returned with the sled to their jet, and took off.

JUST SHORT of four hours from the time they started they returned to the Empty Places. They had gained a little time and were the second team down. From the jet ahead of them, Raj Shiva led a puny, middle-aged co-pilot.

Orkap stood in the underground storage room. Looking at his wrist chrono he said to the four Ophiuchans who came down the ramp: "You made fine time." Raj Shiva's puny companion said something, but Raj Shiva grabbed his arm and they began to

load a second crate. Pandit and Sria loaded theirs in silence.

They made their second round trip in four hours exactly. It was completely dark when they returned to the Empty Places. Sria was worried they would overshoot the cargo point, but Pandit brought the little jet down within a few hundred yards of its take-off point.

They could see nothing when they shut off the jet's running lights, except for the glow which came from the underground room. They reached it and went down the ramp. Pandit judged that half the crates were gone now. He took a quick tour of the dimly-lit room while Sria got the trundle-sled into position against one of the crates.

"Nobody here," Pandit said in a whisper. "The Denebian must be sleeping in the sand-sled."

"Yes," Sria said a little breathlessly.

"I was thinking —"

"What?" Sria said. "Don't stop."

"If we wanted to examine one of the boxes, it would be suicide to open the one we take. But we could open one of them down here, see what it is, take another for ourselves —"

"You would do this?" Sria asked him. Why?"

Pandit shrugged. "I have eyes," he said. "Our gurus did not broadcast the death-wish to outworlders until the Denebians came. Then they started. Have the Denebians sold them on the idea?"

"I don't know," Sria said.

"Well, let's assume they have. Why? Why would they do such a thing, Sria?"

"LET ME get this straight, Pandit. First, you think the gurus actually are making the outworlders kill themselves?"

"Of course," Pandit said. "It's mental suggestion, on a scale only our gurus are capable of. But don't you see, Sria, they wouldn't do it on their own. The gurus are dirty, careless about their bodies — but terribly arrogant. Left alone, they wouldn't think the outworlders important enough to be concerned over one way or another. They certainly wouldn't kill them."

"Go on," Sria urged.

"All right. The gurus have great knowledge of the mystical, but externally they're naive. Let's suppose someone came along — the Denebians in this case — and found something they wanted very badly on Ophiuchus. These crates here, Sria. What would they do? They'd go to the gurus and convince them — it wouldn't be difficult — that any intercourse with outworlders would be harmful to Ophiuchus, that the outworlders want to

colonize and exploit our world, that sort of thing. While the gurus are stewing it over, the Denebians could have prepared this shipment here — whatever it is — for departure. But the gurus, too well convinced by them, could have acted sooner than they expected, making it all but impossible for the small handful of outworlders, the Denebians among them, to go abroad without fear of taking their own lives. Perhaps a few, like Orkap and that other Denebian, are not at all suicide-prone. Perhaps a few can withstand it. As for the rest, it's indoors and away from the mental influence of the gurus, or off Ophiuchus entirely. Which would leave the Denebians with a problem they hadn't thought of." His words made sense.

"Yes!" cried Sria excitedly. "Now that they have their valuable cargo ready to go, how can they get it off Ophiuchus without help?"

"We," said Pandit softly, "are that help."

Sria asked: "What are you going to do about it?"

"I don't know. I honestly don't. I never had anything against the outworlders. How could I? We're all progeny of outworlders who came here almost five hundred years ago from a place called India on Earth. But the gurus —"

"— have been deceived. You said so yourself."

Pandit was sweating, and it was more than the heat which made him sweat. He paced up to the crates, then back again, then to the crates. Suddenly he said, "All right. All right, I'll do it. Someone's got to find out what the Denebians want here."

And Pandit began to pry at one of the boxes with a knife he carried in his loin cloth. Sria said, "I'll keep watch. You call me when it's opened."

"Maybe you ought to get out of here. In case anything happens, I don't want to get you involved."

But Sria went up the ramp and crouched there, waiting, watching. The desert was very quiet, entirely windless, and hot even at night. Stars sprinkled the sky overhead and far off she thought she heard the distant whine of a jet. "Hurry," she called. From below she heard the sound of wood being pried away from wood. She heard, or imagined she heard, the jet coming closer. "Hurry!" she called softly.

Finally three words drifted up to her. "Come here, Sria." She felt a little relieved. Now that he'd finished.

SHE LISTENED for the jet. Now she heard nothing. She went swiftly down the ramp.

Pandit stood before one of the crates, perspiring freely. He had pried loose one of the side walls and a smooth metal surface with stenciled lettering on it was exposed.

He said: "I can't read that. It's a language I never saw before." Sria bent closer and looked at the stenciled lettering. A voice, not Pandit's, said:

"I thought it would be you two . . . No, don't move!"

A big muscular figure silhouetted against the starlight, and a smaller, puny, thin-legged figure. Raj Shiva and his co-pilot.

"A hundred credits each, Handus," Raj Shiva said as he ran down the ramp. "Can you keep the girl from getting away?"

Handus rushed down at his heels.

Pandit met Raj Shiva at the foot of the ramp. Pandit was a big man by Ophiuchan standards, but Raj Shiva was bigger. "Run, Sria!" Pandit cried, and met the giant with his knife.

Raj Shiva parried the blow with his forearm, then his big hands moved swiftly and the knife clattered to the floor. Sria ran for the ramp her bare feet padding swiftly against the stone floor. Handus was waiting for her at the foot of the ramp in an awkward crouch. She had a glimpse of Raj Shiva and Pandit straining together, then Handus struck her with his balled fist. It was a puny blow, but Sria staggered back, her jaw numb. Laughing shrilly, Handus leaped at her. She was shoved back, tripped over something, and fell. For a moment all the lights blinked out inside her head.

Inside — no! Raj Shiva and Pandit stumbled about the room, struck something, there was a loud popping sound, a tinkling, and the lights in the storage room went out.

"Where is she?" Handus called. "I can't find her!"

She heard him groping about, heard the other struggling together. She got to her feet and stood perfectly still, waiting for anything. She wished she had a weapon — something — she was only a woman —

Then a voice whispered: "Hurry, Sria! Hurry!"

"Pandit?"

He took her arm in the darkness. She couldn't see him. They went to the crates and wrestled one on their trundle-sled.

"Not the open one?" Sria gasped.

"No. No."

They heard footsteps . . . Saw a figure for a moment silhouetted against starlight. Handus was fleeing, probably for help.

They took their sled out into the night and dragged it across the sand toward their waiting jet. They loaded the crate in the cargo bay. While Pandit was finishing the job in the darkness, Sria sat down at the controls.

"Ready?" she shouted above the whine of the jets.

Pandit said that he was. She hardly heard his voice.

A moment later, she took the small cargo jet up.

SHE HEARD Pandit moving in the small cabin behind her. She said: "We ought to take it to the League authorities, don't you think?" She had to shout to be heard above the whining roar of the jets.

"Why?"

"I was able to read the writing. It's Procyonian, Pandit. Do you know anything about the Procyonians?"

"Well, a few centuries ago, they were the most warlike people in the galaxy. It was rumored they had a cache of thermonuclear bombs hidden somewhere, after such weapons were outlawed in the twenty-fifth century. The cache was never found, until tonight. We found it, Pandit."

"But Orkap and —"

"That's true. It was found by the Denebians first. Don't you see, Pandit? Orkap and the others, private Denebian traders. It wasn't the government. It never is the government these days. But unscrupulous individuals, Pandit, armed with two dozen hydrogen bombs — why, they could take over their own world on threat of imminent destruction, or some outworld plum they had their eye on, or —"

"I see." Pandit's voice was barely audible above the whine of the jets.

"It's a job the Galactic League can handle," Sria went on. "Now that it's out in the open — or will be as soon as we get to the space-field. You've done your work, Pandit, and your people won't forget you for it. As for me, my work here is finished too."

"Your work?"

Above the roar of the jet, Sria shouted: "Yes. I am Johnny Mayhem." She smiled in the darkness. Johnny Mayhem, she thought, in a girl's body. Well, he'd been young men and old, weak and strong, sick and healthy, human and alien outworlder — so why not a girl too?

All at once Pandit's hand lay heavily on her shoulder. She turned around and in the darkness but with the lights of the instrument board on it saw the gleam of a knife blade. The face beyond the blade, leering from darkness, was not Pandit's. She hadn't actually known it was Pandit. She hadn't seen him. She'd hardly been able to hear his voice.

It was Raj Shiva.

"Fly us to Denebian Exports," he said, "or I'll kill you and do it myself."

"You're making a mistake. Your people belong with the Galactic League, not with a handful of adventurers who —"

"The Denebians are right," Raj Shiva said fanatically. "My people would be better off left alone."

"I'm flying this jet to the spaceport — and the League."

"I'll kill you. I know all about you, Mayhem. You're not a woman, really. You're not even a native. That's a dead body, isn't it? But if I kill it — again — while you're in it, you die too. You'll do what I say!"

THIS VERY night, unless something was done about it, the cache of thermonuclear weapons would be space-bound, the first hydrogen bombs loose in the galaxy for almost five hundred years. Wouldn't mankind ever begin to learn? Mayhem-Sria thought wearily. He knew the answer, of course: most men would, but the few who refused could bring destruction to an entire galaxy

Moments before, apparent success of a mission. Now, failure. Or death. Or both.

Sria's hand flashed out suddenly and struck the instrument board. The jet plummeted earthward with a loud whining sound. Sria felt herself shoved back by the tremendous acceleration into the cushions of the pilot chair. She heard a wild exclamation from Raj Shiva, but couldn't turn around to see what had happened. Grim-lipped she kept the ship hurtling Earthward. She knew it was dangerous and might even prove disastrous. Her body could take so much, then she would black out. But if she didn't maintain the dive until the last possible instant, Raj Shiva would get control of the ship and its vital cargo. She was only a girl, but she was protected by the crash-padding of the pilot chair. Raj Shiva, unprotected, was behind her somewhere

Down through the thin upper atmosphere of Ophiuchus IX screamed the small ship, its heat-dial blinking on and off in warning as friction scorched its thin shell. The scream of air became more deep-throated as the atmosphere became thicker

Ten thousand feet.

Eight thousand.

Six.

Sria's eyes saw black. Her breath was labored. Needles of pain darted in her skull, plucked at her eyes. She opened her mouth to scream but heard nothing. She felt as if she must be forced clear through the protective cushions of the pilot chair.

Five thousand feet.

Four thousand.

Blackness and peace and a settling lassitude

Three thousand feet.

With hands that would barely function, Sria with supreme effort brought the jet out of its death-dive. She slumped in the pilot chair for a long time, too weak to do anything else.

Then she looked back at Raj Shiva.

Who lay slack and unconscious against the rear bulkhead of the cargo ship.

MAYHEM-SRIA BROUGHT the jet down and, middle of the night or no, saw Kovandaswamy. Raj Shiva was taken into custody. A jet was sent out, loaded with Leaguemen who had proved immune to the the guru death-wish and all armed to the teeth. It landed at the cache and stood guard over it. Pandit was found, unconscious, one of his arms broken, but otherwise all right. A second jet prevented the Denebian Export ship from blasting off with the hydrogen bombs already loaded. Orkap and his companion were taken into custody.

The rest, of course, is history. The gurus of Ophiuchus IX were shown what had been taking place in the name of friendship between themselves and Deneb and in the name of isolation. Most of the gurus retired entirely from active life. The few who did not spent the rest of their days working for cooperation between Ophiuchus and the rest of the Galactic League. Orkap and his companion were sent back to Deneb for punishment.


TWO WEEKS later, Kovandaswamy shook Sria's hand.

"A girl," he said. "You did it as a girl. I still can't believe it. But then, of such stuff is the Mayhem legend made."

Mayhem smiled. Already the Hub had a new assignment for him. He could feel the old excitement, the wonder, stirring him. He smiled again and told Kovandaswamy: "Better not tell that fellow Pandit I told he had a crush on Sria."



1. LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED



*If someone from "outer" space
casually strolled into "your" space,
what do you suppose you would
say? Or do? We can imagine all
kinds of dramatic scenarios, but
maybe the whole thing could come
down in a very calm and ordinary
manner.*

the man in the Silver Suit

by K. L. Jones

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE MAN in the silver suit seemed to glide across the floor as he walked up to Slim Marshall. Marshall was absorbed in his efforts to loosen the rusted belt holding the housing unit to the lawn mower motor someone had sold to him for a dollar. It is doubtful that Marshall would have heard normal footsteps. He definitely did not hear any sounds made by the man in the silver suit.

The man reached out and tapped Slim on the shoulder. Slim's reaction was characteristic. He was startled, but nothing short of discovery that his pants were on fire would cause much of a response. All he did was blink.

He turned, and noting the strange, almost glistening quality of the silver suit and somewhat foreign nature of the individual in it, said:

"Yup. What can I do fer ya?"

The man in the silver suit casually glanced around the cluttered shack. Miscellaneous pieces of dismantled machinery lay scattered on the floor. The two work tables were also covered with metallic and other kinds of litter; bolts, screws and tools of various descriptions were intermixed with assorted piles of dirt and grease-stained rags.

"I am looking for a carburetor from a 1962 Mustang. They told me in town that if anyone around here had one, it would be you."

Slim nodded as if the request were typical. But then, in his business, almost any request would seem typical.

"Don't know as how I can help ya. Ain't got nothin' off of a '62 Mustang. Got a '66 back there," Slim pointed with his thumb over his right shoulder in the general direction of the shack's back door.

The man in the silver suit seemed to be thinking the situation over.

"It might do," he said finally. "May I examine it?"

Slim eyed the stranger, running his eyes up and down the figure before him.

"Like I said," Slim said. "It's out back. You go out there in them clothes, ya gonna get 'em awful dirty."

"I'm not concerned with my apparel," the man said coolly.

"Ok then, be my guest," Slim gestured toward the rear door. The man stepped through the door and Slim turned back to the hunk of machinery on the work bench. He tightened a wrench around the bolt and tugged at it. Nothing happened. He was reaching for a hammer when he felt the tap on his shoulder.

"Could you tell me which one is the Mustang," the man in the silver suit asked.

"It's the green one," he said pointing out the door.

Slim watched the man moving effortlessly across the metallic

wasteland that was his back yard. The man got to the car and opened the hood. Slim saw the stranger pull an assortment of tools from some place inside his silver suit and place them on the grill.

Slim went back to his work bench, retightened the wrench and tapped it with his hammer. The bolt moved slightly. Slim began to apply pressure to the wrench when he felt the now familiar tap on his shoulder. He turned to face the man in the silver suit who was standing there with the carburetor in his grease-stained hands. The man placed the carburetor on the work bench beside the lawn mower motor.

Wiping his hands on his suit, he turned toward Slim. The suit now was covered with grease and soil stains. The man's hands became relatively clean as he continued to rub them on the suit. Then, apparently satisfied with the cleanliness of his hands, the man simply tugged at the cloth of his suit in several places. The dirt and grease came off in flakes and slowly drifted to the floor.

"That's some suit, mister," Slim said, after he'd stopped blinking.

"Oh," the man said casually. "Particle charge reversal . . ."

The rest sounded like mumble-jumble to Slim, who simply nodded.

"You want the carb?"

"Yes," the man said. "It will do quite well."

"Ok, that'll be six bucks."

The man stared at Slim as though he had quite suddenly lost the ability to understand English.

"Ah, yes," the man said after a moment. "You'll expect payment."

This time Slim didn't blink. He frowned. Making a living out of other people's junk wasn't easy. Nobody ever wanted to pay too much for what he had to sell. But he'd never had anybody pretend to be surprised about being asked to pay.

"Six bucks and the carburetor's yours," Slim said, still frowning.

"Yes, eh, well, you see, I don't exactly have any cash with me . . ."

Slim stared at the man in the silver suit, then looked down at his own patched overalls. Maybe the rich weren't doing too well nowadays. Nevertheless:

"Six bucks," he repeated.

"Perhaps we could make a trade?"

The man put a hand against the suit and it seemed to disappear, passing through the material. He must have had a pocket, for when he pulled the hand out, it held a small, dull-yellow square.

"Gold," he said, handing it to Slim.

Slim took the small object and hefted it in his hand. It was heavy; it was a heavy hunk of gold colored metal.

"Maybe," Slim said, "maybe not. I mean maybe we can trade. But I ain't gonna take this. This could be gold. Or it could be lead. Hell, for all I know . . ."

Stopping in mid-sentence, Slim handed the square back to the stranger.

"You a jeweler or something?"

"No, nothing like that," the man murmured, placing the gold piece on the work bench. "You might be willing to trade? Is that right?"

"Yeah," Slim said, "if ya got anything worth six bucks."

"That is a problem. Perhaps if I explained my situation, we could reach some arrangement."

"Perhaps," Slim echoed, "but I doubt it. It'll cost ya six bucks. Or something worth six bucks."

"Well, you see I'm stranded here. Without this, eh, piece of machinery," the man gestured toward the carburetor, "I'll never be able to get home."

"Ya could take a bus," Slim said.

"I'm afraid you don't understand," the man said. "I'm not from 'now'."

Slim was trying to decide whether or not he should blink. Instead, he shrugged.

"You see, I was conveyed here by, well, call it a time machine. That doesn't really fit the procedure, but it's the closest term available in your rather limited vocabulary."

"Actually, the machine doesn't travel in time. It is a construction that, oh let's say, propels objects or people through the time stream . . ."

"Are you understanding this?"

Slim nodded.

"Six dollars," he said.

"Look," the man in the silver suit said, "unless I get back to my own time, there might be some kind of adverse consequences . . . No one understands the possibilities and paradoxes of time travel."

Slim sighed. He turned and went back to loosening the bolt on the lawn mower motor housing unit.

"The only way I can get back to my own time is with a make-shift time cannon . . . And to accomplish this I'll need your carburetor and a small amount of rare and precious fluid known as petroleum."

"Ya mean ya need gas?" Slim asked.

"Oh, that's right," the man said. "Petroleum, eh, gasoline, is plentiful now, isn't it? Plentiful and cheap."

"Seventy-five cents a gallon around here. That ain't too cheap," Slim said, "specially if ya ain't got six bucks."

"You don't understand what I am saying, do you?"

"I understand you're trying to get that six dollar carburetor for nothing."

The man stared at Slim.

"This is a matter more serious than life or death," he said coolly.

"Six bucks is six bucks," Slim sighed.

The man looked around the shack, scanning the assorted items scattered about in various states of disrepair.

"Perhaps I could work for it," he said tentatively. "I take it you repair things here."

"Yeah," Slim said cautiously. "What do you think you could fix?"

"Is that some type of propulsion device you're working on?"

"It's a motor for a lawn mower," Slim said. "It's supposed to cut grass."

"It's been malfunctioning?"

"No," Slim said. "It's just busted."

"May I have a look at it?"

"Be my guest," Slim said, moving away from his work bench.

The man reached into his suit again and removed the tools he'd used to get the carburetor. Slim didn't recognize any of the tools. One kind of looked like a screwdriver, only it wasn't quite right. He just blinked and went off to a different corner of the shack. Slim picked up the bag that contained his lunch and nibbled slowly while he watched the stranger in the silver suit dismantle the motor.

"I'M AFRAID I don't know anything about this type of machinery," the man said after a time. "Is there something else? Perhaps something electrical?"

Slim finished his sandwich before replying.

"There's a TV under the table. Wiring's all screwed up. Ifn' you can fix that, I'll give you the carburetor."

Slim knew there was no way anyone could fix that TV. At least, not until they replaced three or four of the tubes, including the picture tube.

"This is something I think I can understand," the man said. "This is a device for receiving radio waves, is it not?"

"Yeah," Slim said disgustedly. "Radio. With pictures."

"There seems to be a malfunctioning cathode tube. Is there an electricity source nearby?"

"Ya can plug the thing in over there," Slim pointed to an outlet near the work bench.

"Hmm," the man said, "this really is quite primitive. Should I

add a broadcast capability, or do you want it to function simply as a receiver?"

"Just so you can get pictures and sound on it," Slim said. "You think you can handle that?"

"I think so," the man said.

Slim went back to his lunch. He couldn't see what the man was doing at the work bench, but he could hear the familiar sounds of tools being used. It was kind of comforting to realize that even if he didn't recognize the tools, the sounds they made in use were the same as his own.

A burst of sparks exploded in front of the man in the silver suit, causing Slim to choke slightly on the last bit of his second sandwich. By the time Slim had finished the pickle his wife always packed, the man had turned around, gesturing toward the TV set.

"I believe this will function adequately now," the man said.

Slim picked himself up and unconsciously began brushing at his clothes. When he remembered how the man had cleaned his silver suit, he stopped.

The guts of the television were spread out on the work table. The inside of the cabinet resembled an electrician's nightmare, as far as Slim could tell.

"How come you didn't put all the pieces back?" he asked.

"They are not needed," the man said coolly. "Indeed, their main function seemed only to create waste."

"Uh-huh," Slim said. "Does it work?"

"It will receive within a rather limited spectrum," the man said.

Slim reached over and turned the set on. Almost immediately a sharp, clear picture of some obnoxious game-show host appeared on the screen. Slim stepped back and stared at the set. Something was wrong with the picture, but he just couldn't figure out what it was. The images were sharp. The colors came across vividly. But there was something wrong . . .

Then he remembered:

"Supposed to be a black and white set," he said.

"What?" the other man said, "Is there a problem?"

"Naw, I guess it's all right. Ok, the carburetor's yours."

The man in the silver suit nodded, then looked timidly at Slim as he packed up the tools he'd used on the TV.

"I do have another request," he said softly.

Slim waited. He knew if he said anything he'd be inviting a reply. So he just waited.

Finally the man in the silver suit said: "I was wondering if I could bring my machine in here and work on it?"

"I don't think so," Slim said.

"I would just take one little corner of your shop. And I'd be gone in an hour or so."

The man paused. He looked at Slim and could see he wasn't making any progress. Then his face brightened:

"After I'm gone, you'll have the machinery from the time cannon. You can dismantle it . . ."

"What kind of machine?" Slim asked.

"Wait, I'll show you."

The man went to the front door of the shack, opened it and stepped outside. He returned a second later wheeling a vehicle that looked slightly like a unicycle enclosed in a plastic bubble. There were four sets of handlebars, and in the middle of three of them sat what resembled carburetors.

Slim blinked again and tried to figure out what the hell good this thing could do anybody.

"Bet you won't get far in that," he mumbled to himself. He scratched his head as he stared at the blasted thing, and then shrugged. There were obviously moveable parts. He could probably find some use for them.

"Ok," he said.

Slim watched as the man wheeled the contraption over to one corner of the shack. He propped it against the wall, then reached into his suit and extracted the tool set he'd used on the television. He also pulled out a small book which he opened and began to read. Since the stranger seemed lost in concentration, Slim went back to the lawn mower motor.

From time to time during the next hour or so, Slim looked over at the stranger. The man in the silver suit was usually in the process of staring at the book he'd placed on the counter. Every once in a while he would alternately tinker with the carburetor from the Mustang, or go over and examine one of the similar items on the machine. Finally, he placed the carburetor on the fourth set of handle bars. Slim watched as the man applied various strange tools which emitted sparks of differing colors.

The show ended when he moved back from the machine and said with an air of satisfaction, "I'm finished."

"Ok," Slim said. "What now?"

"Well," the man said, "if you can spare a cup of gasoline, I'll be on my way."

Slim squinted at the man who had taken over so much of his afternoon.

"You sure that's all ya gonna need?"

"Yes," the man in the silver suit said.

Slim reached under the counter and pulled out a gallon can. He shook it and heard the splashing sound of liquid in motion.

"Bout half full," he said, handing it to the other man.

The man in the silver suit took the can and poured small amounts of the fluid into each of the carburetors. He emerged from the contraption and handed the can back to Slim.

"I suggest you stand back," he said. "There will be a little explosion."

Slim retreated a few steps as the man in the silver suit re-entered his machine. Suddenly, the machine began to spin. As it picked up speed, Slim moved back a little more.

Then, the explosion.

It wasn't much of an explosion. Just a small kind of PUUIFFT!

The contraption continued to spin for a time before it began to slow down. Peering through the plastic bubble, Slim saw that the man in the silver suit was gone.

The machine wobbled uncertainly for a second, then fell to the floor like a wounded gyroscope.

Slim walked over toward the machine and placed his hand on the plastic bubble. It was warm. Shrugging, Slim turned to go back to the lawn mower motor but stopped when he noticed that the man in the silver suit had apparently forgotten to pick up his tools and the book he'd been using.

Slim walked over to the counter and picked up the tools one by one. He had no idea what they were or how they worked. He shrugged again and then picked up the book.

It was bound with a kind of smooth plastic and had the words "TIME TROOPER MANUAL" embossed on the cover. Absently, Slim thumbed through the book. The last half consisted of various schematic drawings of the machine that now was lying on the floor of his shop.

Deliberately he turned to the first printed page in the book. It was headed "FOREWORD." Slim scanned the first few paragraphs and stopped when he read the words, "The first time cannon was built by James Alvin Marshall . . ."

SLIM CLOSED the book and, placing it on the table, backed off. He wasn't used to seeing his name in print. That surprised him far more than the idea that he was going to invent something that already was lying on the floor of his shop.

Slim went back to the lawn mower motor.

Slim knows he'll get around to looking at the time machine someday or other. He knows that as sure as he knows that his name is James Alvin Marshall. It bothers him a little that he's going to have to open that book again. He's not sure if the foreword will have any information about the rest of his life, but he's pretty sure that if it does, he doesn't want to know about it.

It was sort of nice to know he'd be remembered in the future as a great inventor. The fact that he really wasn't an inventor didn't bother him at all. ●

living-room where his grandfather's desk still stood beneath a window, and looked out. The window faced northward, along the California coastal cliffs that run north along Morro Bay to Big Sur. The Pacific foamed and surged against the huge broken stones beneath the cliffs, and the hills, somber now with a tinge of autumn, shouldered massively up toward the east from the cliff road. It all looked as lonely as ever, no other houses in sight but this gray, weatherbeaten house that had faced the sea-wind and the sea-fog for over a hundred years.

Kellard walked back along the hall. On its walls still hung the ornately framed family photographs which his grandfather had stubbornly kept in place. His great-grandfather, and his great-aunt something, and all the rest of them; on back into the shadows. They were all there, they had not been touched, nothing in the house had been touched, just as his grandfather's will had enjoined. Keep the old house, he had said. Some of the family will be back some day.

The old man had been right, he thought. One of the family had come back at last, one who had roamed farther than almost anybody on Earth.

"But that's all done with," he told himself. "Here I am, and here I stay. I'm through with space."

HE STARTED through the rooms, opening windows, letting in light and air. The furniture was faded and old-fashioned, but the place was not dusty; the agent had seen that it was kept in shape. Kellard picked one of the big upstairs bedrooms for himself, and brought in the blankets and cartons and luggage from the car. He went into the utility room and turned on the power-unit, remembering as he did so how his grandfather had disliked and distrusted the unit, how he had refused to have one until the electric wires were all gone and there was no other way to get power. He checked the stove and freezer, shoved his cartons of food into the latter, and then looked around and wondered what to do next.

Standing in the silent house, he wondered suddenly if he had been foolish to quit everything and come back to Earth and this old place.

No, he thought heavily. Mercury ended it for me. I made my decision and that is that. Forget it.

The next morning he was making coffee when there came a banging of the old-fashioned knocker on the front door. A certain tightness came into Kellard's face. He had expected them to send someone.

He had not expected the man who stood at the door. He was not in Survey uniform, although he was the highest brass there was. He was a big, slow-moving man with a heavy face and blue eyes that seemed mild if you didn't know him.

"Well," said Kellard. And after a moment, "Come on in."

Halfrich came in. He sat down and looked interestedly around at the old room and furniture.

"Nice," he murmured. Then he looked at Kellard and said, "All right, let's have it. Why did you quit?"

Kellard shrugged. "It was all in my letter of resignation. I'm getting a bit old and tired for Survey, I —"

"Bull," said Halfrich, "It was something about that crack-up on Sunside, wasn't it?"

Kellard said slowly, "Yes. The deaths of Binetti and Morse, and the after-effects of that shock, made me feel I didn't have it any more."

Halfrich looked at him. "You've had crack-ups before. You've seen men die. You've had almost as many years in Survey as I have, and you've taken as many jolts. You're lying, Kellard."

Kellard got up, and walked a few steps and swung around again.

"So I'm lying. I want out, and what difference does it make why?"

"It makes a difference," Halfrich said grimly. "I remember from away back at Acad my, even though you were two years after me. You were the space-craziest cadet there was. You spouted the glories of the conquest of space until we were all sick of it. You haven't changed in all the years in Survey — until now. I want to know what can change a man like that."

Kellard said nothing. He went to the window and looked out at the long rollers coming endlessly in and crashing against the rocks.

"What did you see on Sunside, Kellard?"

He turned around sharply at that.

"What do you mean? What would there be to see there, but hot rocks and volcanoes and a cross-section of hell generally? It's all in my report."

Halfrich sat like a judge, and spoke like one pronouncing sentence. "You saw something, you *met* something there. You covered by tearing out the film of the automatic sweep-camera. Whatever it had recorded, you didn't want us to see; did you?"

Kellard came toward him and spoke angrily and rapidly. "Do you realize that we flamed out and crashed there? A crash like that can do damage. It killed Binetti and mortally injured Morse, and smashed the sweep-camera."

Halfrich nodded. "That's what we thought, at first. But the radar-sweep had an automatic recorder too. It was something new. Binetti knew about it, as communications officer, but I guess he hadn't told you, or you'd have smashed it too. Its record shows something."

A COLD feeling came over Kellard. He had thought that he had covered everything, but he had calculated from insufficient data.

He kept his nerve. A radar record was not like a photograph, they couldn't prove much from that; they certainly couldn't guess the truth from it. They *must* not guess the truth.

He laughed mirthlessly. "A radar record made on Sunside isn't worth the paper it's on. The storms of radiation there make radar practically unreliable."

Halfrich was watching him keenly. "But not entirely. And over and above the static and the fake bogies, the record shows quite clearly that you went outside the ship after the crash, that you walked about a thousand yards, and that you were approached by some things that register vaguely but unmistakably."

He paused and then he asked, "Who — or what — did you meet there, Kellard?"

Kellard was cold inside, but all the same he made a disgusted sound that he hoped was convincing.

"Who would I meet on Sunside? Beautiful lightly-clad maidens? After all, you know, it's only four hundred degrees Centigrade there, and practically no atmosphere, and nothing much else but solar radiation and hot rock and volcanoes. I tell you, the radar record is worthless."

Halfrich was studying him with that mild estimating look that Kellard knew well, and didn't like at all. It was the look that came into Halfrich's face when friendship didn't matter and the good of the Survey did.

"You're still lying," he said. "You met or saw something there. And it did something to you — something that made you resign. Something that's taken all the life and eagerness out of you."

"Oh, hell, be reasonable!" said Kellard angrily. "You know no kind of life can exist on Sunside. My mission was the second time even Survey has landed there. Pavlik's mission, the first, didn't see anything. Neither did I. Quit dreaming it up. Go back to Mojave and your job, and leave me be."

HALFRICH ROSE. "All right," he said. "I'll go back to the base. And you're going with me."

"Oh, no," said Kellard. "I'm through, quit, resigned."

"Your resignation has not been accepted," Halfrich told him. "You're still liable to Survey discipline. You'll obey orders just as you always did, or you'll go up before a court-martial."

"So that's it," said Kellard.

Halfrich nodded. "That is it. I don't like to do this. You're an old friend. But —"

"But the Survey comes first," Kellard said, between his teeth.

"The Survey," said Halfrich, "comes first. It has to. It's why we've got stations on Venus and Mars and Ganymede, not to say the Moon. It's why we'll someday be able to hit for deep space and the starworlds. And when one of my best officers suddenly goes off the deep end and won't say why, I'll damn well wring it out of him. Whatever you found on Mercury doesn't belong to you, it belongs to us, and we'll have it."

Kellard looked at him and started to say something and didn't, and then turned his back on Halfrich and looked out the window at the sea. In a low voice he said,

"Let it be, John. I'm telling you now, you'll be sorry if you don't."

There was no answer to that at all, and the silence was his answer. He turned back around.

"All right, you have a rope around my neck. I'll go back to base with you. I'll tell you not one thing more than here."

"In which case," Halfrich said, "we'll go on out to Sunside, and you'll go right along with us."

A rage born of desperation came to Kellard. He had tried to spare people this — Halfrich, the Survey, the whole human race. But they would not let it be so. Damn them, he thought; if they must do this, they have it coming to them.

"All right," he said flatly. "I'll get my jacket. I take it that you have a flier waiting."

THE FAST flier, less than an hour later, whizzed down over the gaunt mountains and across the desert, and the glitter and splendor of Mojave Base sprang up to meet them. The tall ships shone like silver, and something about them, something about the feel of the place, made you think that this bit of desert did not belong to Earth at all but was part of space, a way-station, the first way-station of all, to the stars.

He knew now that he had no choice. He must go back to Sunside with them. For even if he told them the truth, they would not believe; they would insist on going to see for themselves. He would keep silent, and that was all he could do now.

FOUR DAYS later a Y-90 experimental cruiser, outfitted for space research and with full anti-heater equipment, took off from Mojave. Kellard had kept silent. And still silent he sat in his recoil-harness and took the jolts, and heard Halfrich grunting beside him, and viciously hoped that he was not liking it.

Halfrich had brought along a consulting biophysicist, a keen-faced man of middle age named Morgenson, who did not look as though he was enjoying the mission either. But the three-man crew of the little Y-90 were young men in their twenties. They spoke to Halfrich and to Kellard as though they were heroes out of legend, for in the Survey twelve to fifteen years of space-missions was an age.

"I assume," said Halfrich, "that you bear none of us any personal ill-will. If there is anything dangerous awaiting us, now would be the time to tell us."

Kellard considered. "You're going to land, I suppose, at the same spot where we crashed."

"Of course."

"Then land," said Kellard. "As far as I know, there is not a thing there to harm you."

In the scanner, he watched Mercury swing slowly toward them, a tiny crescent of white that was hard to see against the Sun. For here the Sun was a monster thing, fringed with writhing flames, paling the stars, drenching this whole area with radiation that already would have killed them but for the ship's anti-heaters.

The Y-90 went into its landing pattern. It skimmed over the dark side of Mercury, the black cliffs and peaks and chasms that never saw the Sun, and then light seemed to burst ragingly up from all the horizon ahead of them, and they were over Sunside.

In old days this little world had been called "the moon of the Sun," and it looked like it, the same stark, lifeless rock plains and ridges and cracks, the fang-like look of pinnacles in a place where no atmosphere eroded anything. But the Moon was cold and still, whereas Sunside seemed to throb with sullen hidden fires. Volcanoes spewed ash and lava, and the infernal storm of radiation from overhead made everything quiver in a shimmering haze. The indicator board told them that

the temperature of the outside hull was climbing to four hundred as the Y-90 went down.

And the wide valley that haunted his dreams opened up ahead.

Across it the squat volcanic cones still dribbled ash and dust, and it was all just as it had been when he had last looked back from the relief cruiser that had come from Venus Station to take him off. And there gleamed bright on its floor the crumpled wreck in which Binetti and then Morse had died.

Kellard's gaze flew to the place north of the wreck, the tumbled, odd-shaped rocks. He felt his palms sweating. Maybe there would be nothing. After all, could it all happen again?

They set down, and after the crashing rocket uproar, the steady throb of the anti-heaters was an anti-climactic sound.

"You've got the armor ready?" Halfrich asked of Morgenson.

The biophysicist nodded nervously. "Three suits, with their anti-heater equipment tested on and off all the way out."

"One suit stays here, for emergencies," Halfrich said. "Kellard and I will go out, when there's something to go out for. First, we'll make observations."

THE RECORDING telescope-cameras and the radar, Halfrich ordered focused on the place of the odd-shaped rocks. And then, sitting there on Upside, they watched. They waited.

Nothing.

Kellard's hopes began to rise. He was right, he told himself; it couldn't happen again.

"How long," he asked, "are we going to sit waiting for nothing because a radar made a screwy record? If those anti-heaters quit for five minutes, we're fried."

Halfrich looked at him bleakly. "I'll tell you how long. Till you tell the truth, and we see the truth for ourselves. That's how long."

Kellard shrugged. "If that's the way you want it. I would tell you to go to hell except that we're already there."

They watched and waited some more.

Morgenson said, on a rising note of excitement, "There's something —"

Halfrich got to the 'scope fast. Kellard, looking through the scanner, saw the geyser of flame that was beginning to pour up from the rocks. It grew slowly, but steadily, in height.

"What is it?" Halfrich asked him.

"Can't you see for yourself?" said Kellard. "There's a blowhole out there and it throws off burning gases from the interior. It did it twice while I was waiting in the wreck."

Halfrich said, "It's in the same location where radar recorded you before, with those other blips. There's something about this — We'll go have a look."

"If you must," said Kellard. "You'll find it's just what I've said."

They got into the heat-armor. It was a clumsy outfit, for it had to have room for an efficient anti-heater, and the long tube of the heat-discharge was a nuisance. Kellard had spent days in one of these suits, waiting for the relief ship after the crack-up, and he did not like the feel of it at all.

Halfrich tested the radio and then said, "All right, Shay, lock us out and stand by. Morgenson, you keep watching."

They stepped upon Sunside.

There beat down upon them such a storm of radiation, such cataracts of heat and light, that instinctively they bowed their heads as before a deluge. It took an effort of will to step forward through that tempest, but Halfrich made it. They walked, slowly and heavily, and at first they saw only the blackened rocks beneath their feet, and the little puddles and rivulets of molten lead, and their own massive armored feet plodding.

Then, as they went forward, they straightened against the impact. Through the face-plate of his armor, dimmed by the many-layered filters, Kellard saw the column of flame ahead. It was a hundred feet high now, and growing higher, and though there was no air-borne sound on this almost airless world, the sound of it came through the rocks and the soles of their feet, a throbbing and roaring that quivered through all their bodies.

THEY REACHED the tumbled rocks, and stopped. And now the fire-fountain was so lofty that they had to lean back their heads to look at its topmost crest. Some unthinkable diastole and systole of the fiery planet was at work, and this periodic geyser of flame was its result. The rocks shook and roared, and the fires raged higher, and Kellard thought again, what devil is in the blood of our race that drives us to places like this where we should not be?

"I told you," he said to Halfrich. "Just a blowhole, that's all."

"The blips on the record moved," said Halfrich. "There was more than this."

"Look around you!" cried Kellard desperately. "Do you see anything moving, anything that *could* move? You were wrong, Halfrich. Do you have to keep us here until we all die, because you can't admit you're wrong?"

Halfrich hesitated. "I wasn't wrong. You're still lying. But we'll go back to the ship and wait."

They turned their backs on the fire-fountain, and Kellard felt the sweat pouring on his forehead. It hadn't happened this time, and they couldn't wait forever; they would have to go away and —

Morgenson's voice chattered in their ears. "Blips showing, coming —" And then he suddenly yelled, "I see them! They —"

Halfrich swung around with ponderous swiftness. There was nothing between them and the fire-fountain, nothing around the spouting flames.

"Above you, coming down!" shouted Morgensen. "My God, what —?"

Kellard slowly raised his head. Because he knew what to look for, he saw them while Halfrich was still gazing around searching.

They came flashing down out of the sky. There were four of them this time — no, five. They were like five individual swirls of shining light, so bright that the sun-bleached heavens seemed to darken around them.

Halfrich said bewilderedly, "I don't see —"

Kellard pointed upward. "There."

"Those flakes of flame?"

"Not flakes of flame," said Kellard. "They are the children of the stars."

Halfrich went rigid, staring upward. And now Kellard knew that there was no more hope. No hope at all.

The five bright things had flashed down toward the great fire-fountain. They plunged into it, out of it, climbed swift as the eye could follow, racing upon its mighty geyser, frolicking in it joyously. The fountain raved higher and the five sped up and whirled and danced upon its rising plume, and Kellard thought that they were laughing.

In and out of the leaping fires they plunged, and then one of them veered down toward the place where Halfrich and Kellard stood. There was something so humanly purposeful in its sudden movement that Halfrich stepped back.

"Stand still," said Kellard.

"But —" Halfrich protested.

"They won't hurt us," said Kellard, his voice flat and dull. "They're friendly, playful, curious. Stand still."

And now all five of the flashing flames were around them, darting, recoiling, then gliding forward again to touch their heat-armor with questing tendrils of living force, living light.

Halfrich spoke, trying to keep his voice steady but forming the words in a choked fashion.

"Something — in my mind —"

"They're telepathic, in a way you can't even imagine," said Kellard. "And they're curious. They're curious about us, what we are, how we think. They can merge minds with us, somehow." And he added, with a last cruel impulse of dying anger, "You wanted to know. Now know."

He had time to say nothing more before the impact hit him, just as it had that other time, the full stunning shock of unearthly minds interlocking with his own, searching out his thoughts and memories.

Curious, yes. Like children who have found strange, ungainly creatures and wish to know how they live. And as they entered his mind, Kellard's mind entered theirs, fused with them, and there was again the dizzying whirl of memories and feelings that were not his own, that his different, more brutishly physical nature could never apprehend more than dimly.

But that half-apprehension was staggering. He was no longer Hugh Kellard, a man with flesh and bones who had been born on an air-drowned heavy planet named Earth.

He was one of the children of the stars.

His memory stretched far back, for his life was almost unlimited in time. For long and long beyond human comprehension he had lived with his companions the strange and beautiful life of their kind.

Born of the stars, of the unimaginable forces, pressures, temperatures, atomic conditions within the mighty suns. Born, as the end product of an evolutionary chain almost as old as the universe itself, a grouping of photons that grew toward consciousness, toward individuality and volition. Their bodies were force, rather than matter, their senses had nothing to do with sight or hearing, their movement was an effortless flash and glide as fast as the photons of light itself.

WITH THE other kind of life in the universe, the heavy slow-moving things of matter that grew upon the comparatively cold, dark planets, they had had nothing to do at all. They were of the suns, not the planets, and those chill worlds of fixed, solid matter so repelled them that they would not even approach most of them.

Star-child, star-child, at home in the bursting splendors of the stellar fires, and able to move like light from star to star. And again Killard felt the agony of that ecstasy that was his in this shared memory.

"We things of matter, we men, who thought that space and the stars would be ours —"

But how could the wide universe belong to solid, heavy, physical creatures who must painfully move in bubbles of air, who crawled between the petty planets encased in metal tombs, who could not even approach the glories of the great suns?

No, the ecstasy was one that men could never know except at second-hand through this brief contact! The glorious rush together of the star-children through the vast abysses, drinking up the energy of the radiation about them. The audacious and dangerous coasting along the shores of dark nebulae, racing the lumbering comets and leaving them behind, on until you felt through all your photons the beckoning warmth of the star you approached. Ignore the cinders called planets that creep around it, speed faster, faster, brothers, the way has been long but we are almost there! And now the radiation that was so weak in the outer darks is strong and lusty-roaring, and the great prominences reach out like arms to gather us in. The shock, the joy, of the first plunge once more into the star. Dive deep, brothers, deep through the outer fires into the throbbing solar furnaces where the atoms are hammered as in forges, changing, shifting their shapes, exploding into force.

Spin in the vortices of the great stellar tornadoes, fling off and fall headlong and then dive laughing in again. Search for the others of your kind; if there are none here there will be at the next star. Up again, out of the boiling fires, and then drift quiet, dreaming, in the pearly glow of the corona, endless afternoon of warmth and light and peace.

BUT ON the sunward side of the tiny planet nearby, a plaything beckons. Fire and light fountain up from the solid rock. There at least we can go, for that place is washed by tides of solar life, not chilled and dead. Speed down toward it, as the fire, the life it spouts higher out of the repellently fixed and solid matter. Frolic in the fountain, through and around it as it rises higher. And what are the things that move on the rock near it, the things that look grotesquely as though matter had been endowed with life? Reach out with your thought-senses and try to apprehend them. Mind, life — in matter! Try to understand how matter thinks, how matter feels, plumb the grotesque memories of them, the vistas of crawling things at the bottom of whelming air-oceans, things of clay too frail to endure, yet things that in their brief living have come here. But the mind recoils from such memories, such a life.

Brothers, we go! First to refresh ourselves in the deepest streams of the star, and then away across the abysses to another star we know. There is nothing to hold us here —

And the oneness was gone from Kellard's mind, and he was no child of light and stars; he was a man of clay, standing stupid and sick and shaking by the falling fires of the fountain.

He looked at Halfrich. But Halfrich stood, with his head bowed, and Kellard felt only pity.

He touched his arm. "We'll go back to the ship."

For a long moment, Halfrich did not respond. Then he turned and walked, plodding with head down, not looking up once at the flaring sky.

IN THE little ship, he sat later with Kellard. He had not spoken yet, and Morgenson and the others, bewildered and awed, had still not dared ask questions. Finally Halfrich looked at Kellard, pain still in his eyes.

"I was thinking," he said. "I was remembering my little boy, years ago. He had just learned to walk, and he started out the door, eager to explore the whole town. He stubbed his toe, and he sat down and cried.

"You tried to spare me this," said Halfrich after a little while. "Thanks for that, Kellard. It didn't work, but thanks anyway."

Kellard said, "Look, no one else knows. No one else is ever likely to know. The only place where the men of matter and the children of stars could meet is a place like Sunside, and how many such meetings would ever by chance happen? We don't have to tell everyone, to take the heart and eagerness out of them by letting them know they'll always be second-best in space."

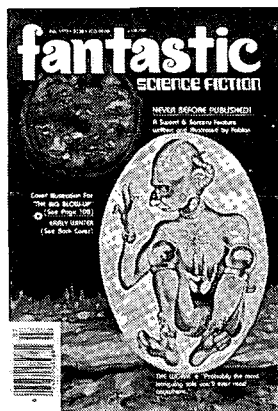
Halfrich thought about that. And then he shook his head. "No. We've stubbed our toe. We've learned we're not and never will be the sole inheritors of the universe. All right, we'll accept the fact and go on. The planets will be ours, just the same. And someday —" He paused, then said, "— someday, maybe, the sons of the planets and the children of stars will take hands, know each other. No Kellard. We'll tell them."

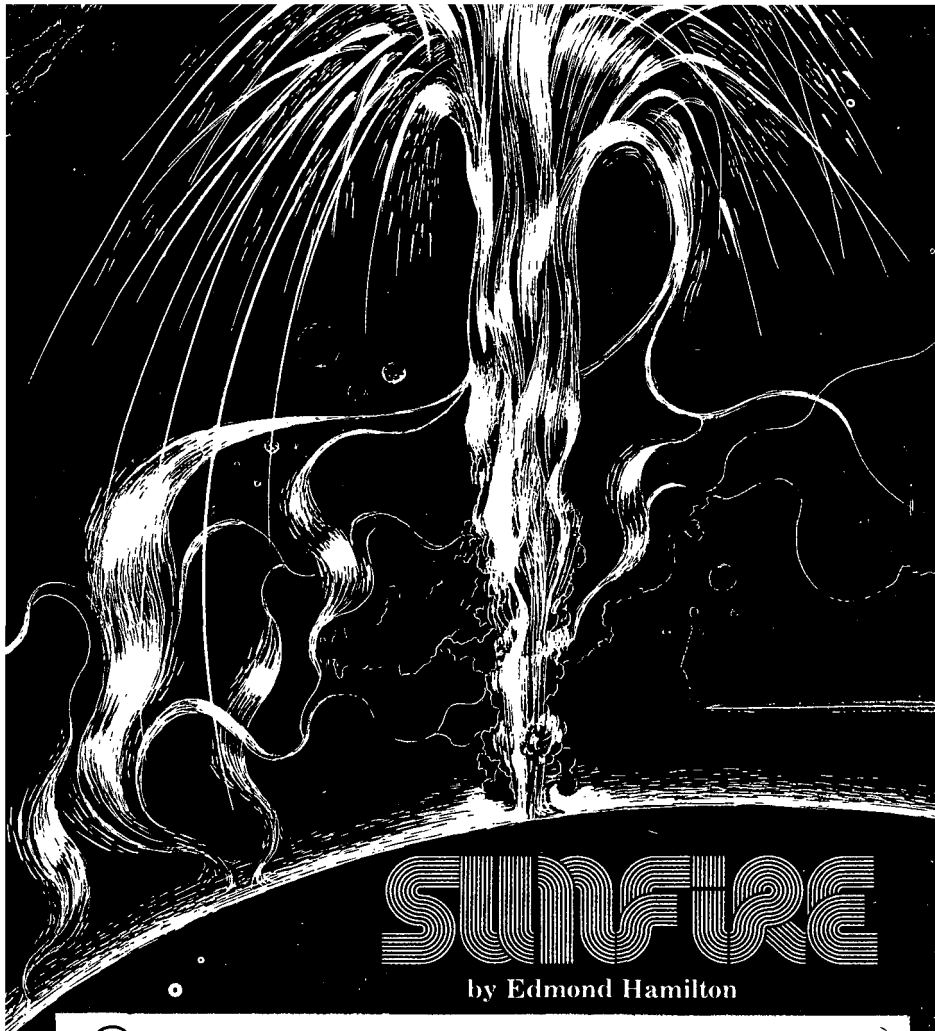


**Buy the
July, 1979
issue of...**

NOW ON SALE

at your favorite newsstand





SUNFIRE

by Edmond Hamilton

EVERYTHING IN the old house seemed just the same as it had been before he went to space.

It was incredible, thought Hugh Kellard, standing in the front hall and looking around the silent, sunlit rooms, how little it had changed. The life was gone out of it now, all the people and voices and the comings and goings when his grandfather still lived and he had visited here. But that had been long ago, and he was amazed that so much remained still untouched.

Like travelling into the past, thought Kellard, to come back to this part of Earth.

He was tired, in body and mind and nerve, and he stood for a while, just staring. The agent who cared for the old place had let him in and gone away, and there was not a sound in the house. He walked into the

ELECTRONIC REPRODUCTION PROHIBITED (continued on page 123).